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THE DOWNTOWN FARMER

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a guide for city gardeners

Large numbers of people in cities all over the country are proving that you don't have to live on a farm to grow your own vegetables.

The city offers special challenges to the gardener - poor soil, uncertain water supply, and pollution from cars and industry. It also offers special opportunities - a longer growing season, the chance to learn from many people and to share food and ideas, and the satisfaction of shaping your own neighborhood.

This handbook is designed to help every city gardener, from the beginner to the expert, overcome these problems and make the most of these special opportunities with practical, easy-to-read directions and inexpensive solutions to gardening problems.

Prepared For:

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Radcliffe Seminars
Program in Landscape
and Environmental Design

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APPROVED by Daniel Carter, State Purchasing Agent

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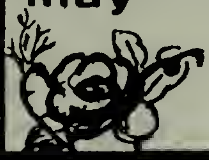

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Enjoy What You Have Grown

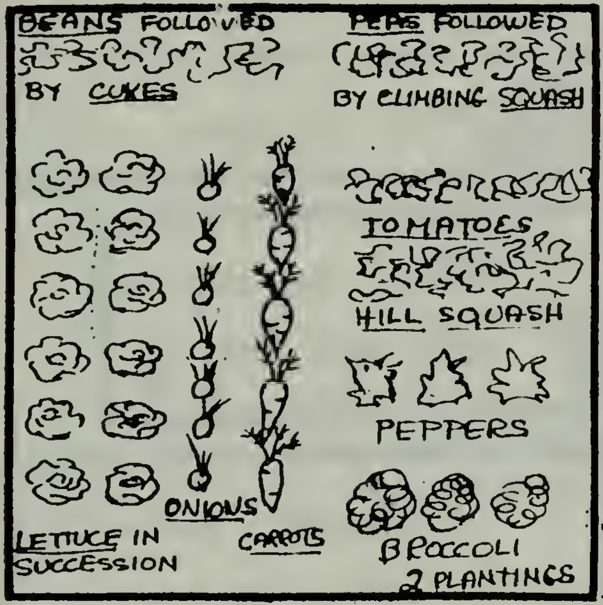
december

Go Over Last Year's Plans

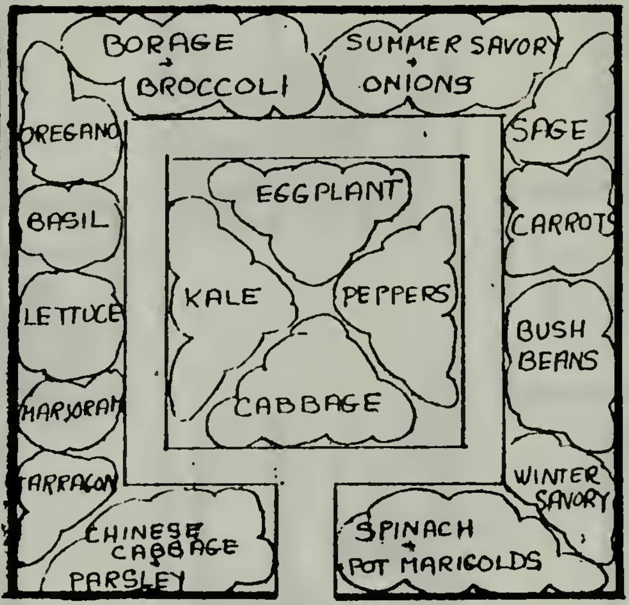
sample plans

Decide what kinds of food your family likes to eat and then plan your garden with those vegetables in mind. It's a good idea to start by drawing a plan of your garden on paper and take it with you to the garden when you plant.

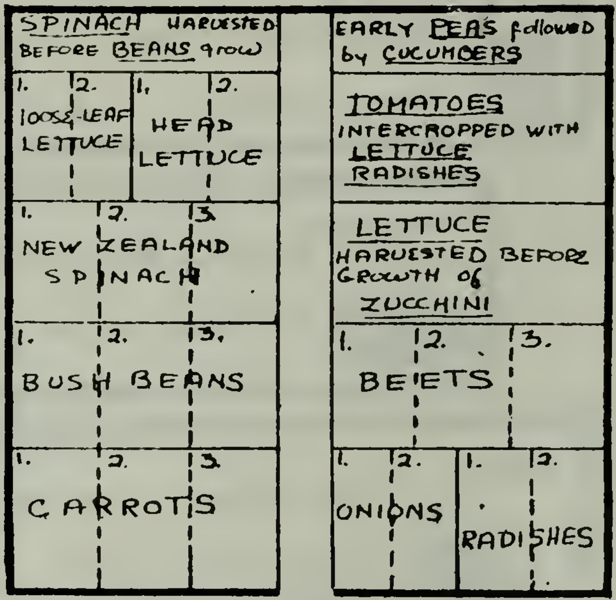
Watch your plot for sun patterns and shadows (from buildings or trees) to see which area gets the most sun.



1. VEGETABLES



2. VEGETABLES + HERBS


SPINACH HARVESTED BEFORE BEANS grow
1. 2. LOOSE-LEAF LETTUCE
1. 2. HEAD LETTUCE
1. 2. 3. NEW ZEALAND SPINACH
1. 2. 3. BUSH BEANS
1. 2. 3. CARROTS
EARLY PEAS followed by CUCUMBERS
TOMATOES INTERCROPPED WITH LETTUCE RADISHES
LETTUCE HARVESTED BEFORE GROWTH OF ZUCCHINI
1. 2. 3. BEETS
1. 2. ONIONS
1. 2. RADISHES

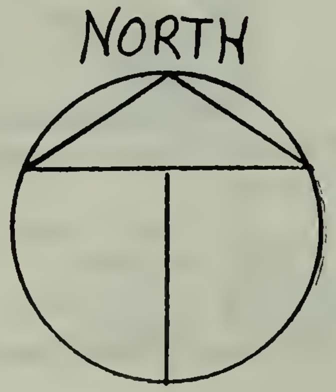
3. VEGETABLES
CROPS PLANTED AT INTERVALS TO GIVE A LONGER HARVEST

ROWS SHOULD GO FROM NORTH TO SOUTH FOR MAXIMUM SUN.

TALL CROPS ON NORTH SIDE TO PREVENT SHADING.

RUN ROWS ACROSS A SLOPE NOT UP AND DOWN.

CHECK SEED CATALOGS FOR BEST VARIETIES.

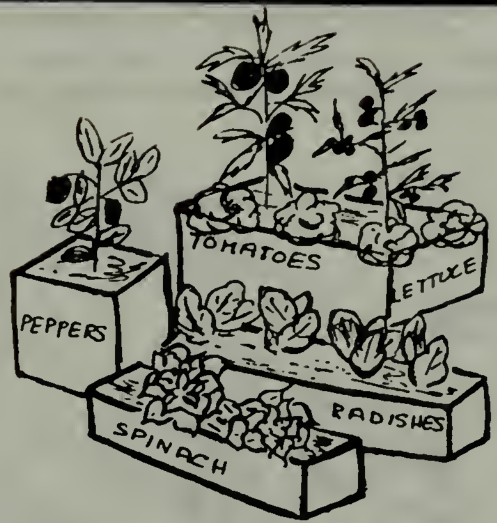


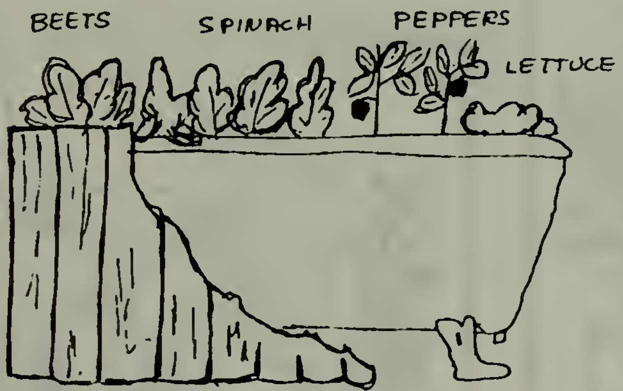
container gardens

Indoors and outside, on fire escapes, porches, window sills and rooftops you can grow vegetables in baskets, tubs, buckets, bowls, plastic bags - anything that will hold 8" to 10" of soil is a mini garden site.

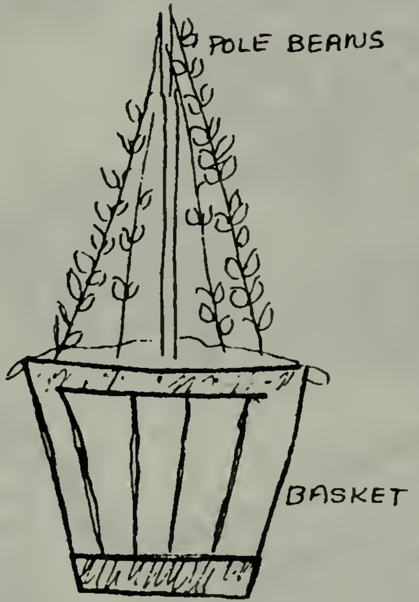
Plants in boxes and tubs dry out fast. Poke your finger in to see if the soil is dried out. WATER OFTEN. They get hungrier faster than those in the ground. FEED WITH FERTILIZER EVERY TWO WEEKS.

MAKE DRAINAGE HOLES TO LET THE EXTRA WATER OUT.





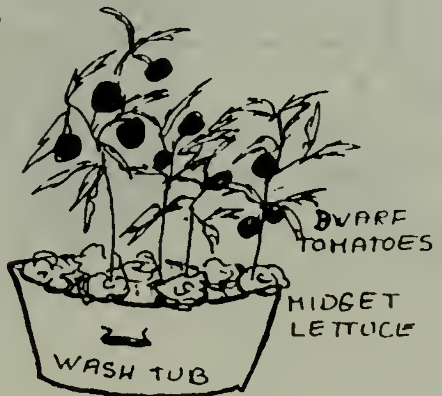
OLD TUB ENCLOSED BY WOOD



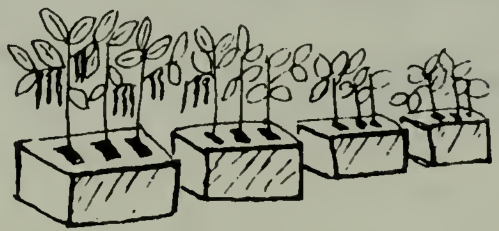
MAKE A SOIL MIX OF:

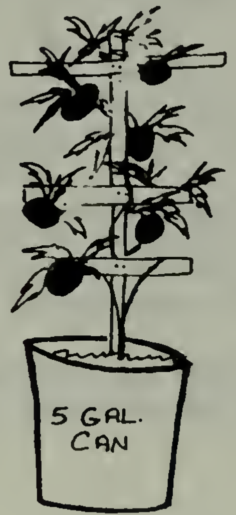
1/2 SOIL
1/2 SAND, PEAT OR
VERMICULITE

TO KEEP SOIL DAMP, PUT A SMALL POT INSIDE A BIGGER POT WITH STONES IN BETWEEN THE TWO POTS.



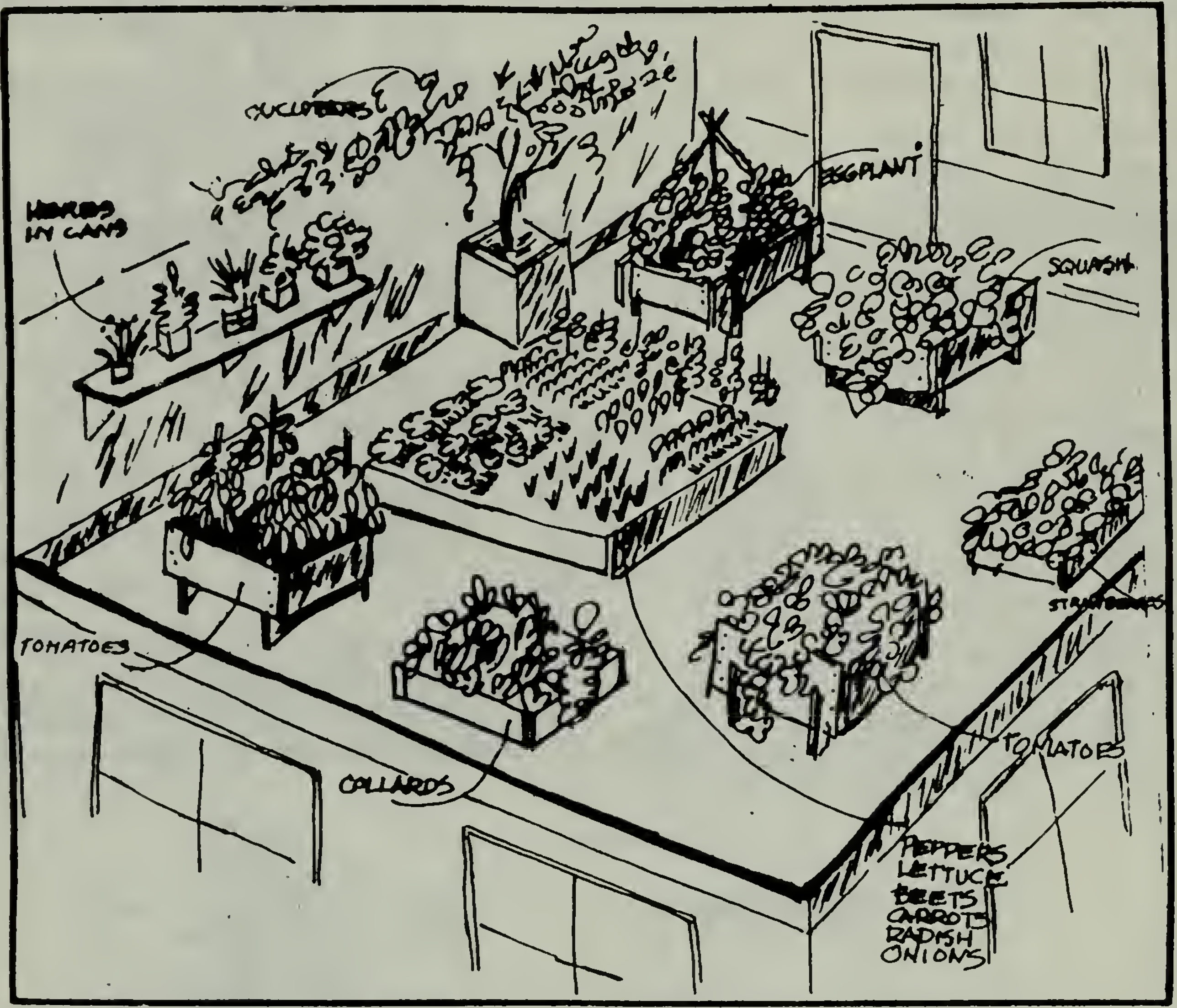
BUSH BEANS IN HOLLOW CONCRETE BLOCKS





small space gardening

Anyone, anywhere, can have some kind of a vegetable garden. Use your imagination.



POTTED AND BOXED VEGETABLES CAN BE PLANTED ANYWHERE YOU HAVE ROOM AND SUN.

IN NARROW SPACES, TRAIN PLANTS TO GROW UP. USE CHICKEN WIRE OR CREATE A TRELLIS FROM STAKES OR STRING. DON'T LET VINES SPRAWL ON THE GROUND.

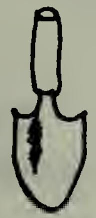
TRAIN FRUITS AND BERRIES TO GROW ALONG FENCES AND THE SIDES OF BUILDINGS.

USE THE SPACE BESIDE YOUR WALKS AND BUILDINGS.

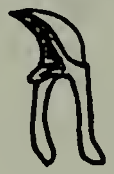
tools

BUY THE BEST TOOLS YOU CAN AFFORD. THEY WILL LAST LONGER AND SAVE YOU MONEY.

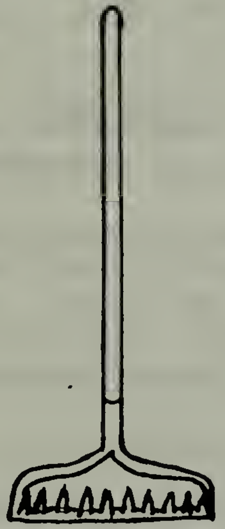
If you can only buy one tool, a spade is a good choice. Use it for digging, turning over soil and carrying rocks.



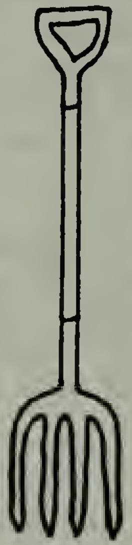
Useful for
small jobs
like
transplanting.



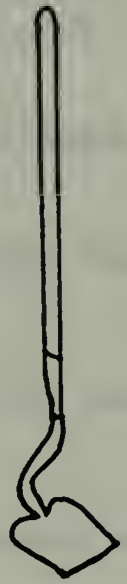
Use to cut
up big weeds
and stems.



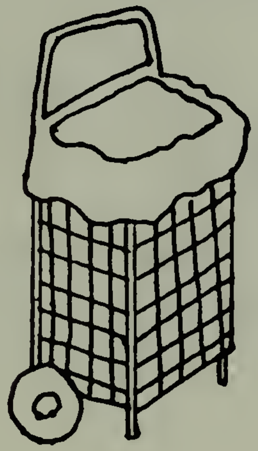
Use to smooth
soil and take
out rocks.

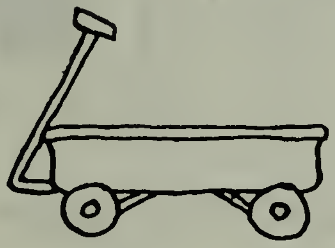


Use to break
up soil.



Use to weed
and keep soil
loose during
growing
season.





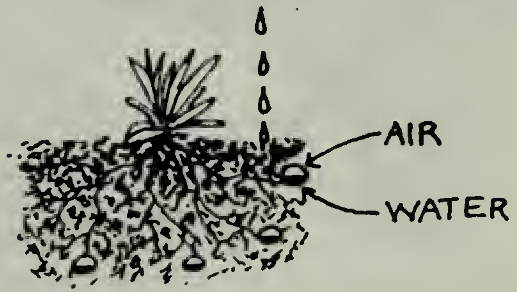
USE A SHOPPING CART LINED WITH A PLASTIC GARBAGE BAG OR A WAGON TO CARRY TOOLS, PLANTS AND HEAVY THINGS TO THE GARDEN.

look at your soil

Many city soils have been robbed of their life-giving nutrients. New top soil is expensive and hard to find. Let's look at what makes up soil so we can see how to rebuild it and how to make new soil for the best crop of vegetables. SOIL LIVES. IT IS MADE OF MINERALS, BITS OF PLANTS AND TINY ANIMALS, AIR AND WATER. For good plant growth, a rich, loose soil is needed. Take a shovel or trowel and dig into your soil. Look at it, feel it and smell it. How would you describe it?

SANDY SOIL	**LOAM** (IS WHAT YOU WANT)	**CLAY** (SOMETIMES HARDPAN)
feels gritty, rough	feels soft, crumbly	feels hard when dry feels rubbery when moist feels greasy when wet
looks loose	looks porous, full of holes	looks too tight and hard
	smells good	
has largest size bits	mix of different size pieces	tiny particles stick together
loses water too quickly and dries out	in the spaces, roots can grow well and have plenty of air and water	water can't get through crust

DOESN'T HOLD WATER



WATER STAYS IN PUDDLE ON TOP OF CLAY

CITY SOIL OFTEN CONTAINS LEAD. SEE PAGE 8 FOR WHAT TO DO ABOUT THIS PROBLEM.

have your soil tested

YOUR SOIL CAN BE TESTED FREE, SO THAT YOU WILL KNOW EXACTLY WHAT IT NEEDS.

1. Choose a day when soil is not frozen or too wet.
2. Dig a hole about six or seven inches deep and scrape some soil from the edges into a clean paper cup. Take soil from several sections of the garden and mix them together. Put one cup of the soil into a clean carton.

3. Label your sample with the location of your garden, what you plan to plant there, and your name and address. Ask for the nitrogen, phosphorus and potassium content (NPK for short) the pH level, and the humus content. (See page 8)
4. Take or mail samples to:

University of Massachusetts
Suburban Experimental Station
240 Beaver Street
Waltham, Massachusetts 02154

(phone: 891-0650)

TELL THEM:

1. SAMPLE TAKEN FROM LOT AT 27 SIMON ST. BOSTON
2. I PLAN TO PLANT VEGETABLES
3. FRANCINE DUBOIS
   13 QUINN ST.
   JAMAICA PLAIN

ASK FOR

PLEASE TELL ME
1. NPK
2. pH LEVEL
3. HUMUS CONTENT

LEAD IN THE SOIL-- A SPECIAL PROBLEM

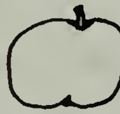
All vegetable gardeners should have their soil tested for the presence of lead. Soil sampling instruction sheets are available from the Division of Agricultural Land Use, Mass. Dept. of Food & Agriculture, 100 Cambridge St., Boston, Ma. 02202 and GREENSTOCK Program, U. Mass. Downtown Center, 100 Arlington St., Boston 02125. Soil samples should be brought to the GREENSTOCK program if you live in Boston, Cambridge, Brookline, or Somerville. Outside of these areas, bring samples to your local County Extension Office. Test results and recommended gardening practices are reported to each gardener.

improve your soil

You can improve your soil by adding FERTILIZERS, LIME and HUMUS. The soil test tells you how much of each is needed. In the store many different kinds of soil improvers are sold. How do you decide which to use?

1. 5-10-5 FERTILIZER is a good all-purpose, cheap fertilizer for starting a new garden. What do the numbers mean? They tell the amount of each mineral element in the bag or box. 5-10-5 means 5 percent nitrogen, 10 percent phosphorus, and 5 percent potassium - always in this order. Stronger fertilizers are not best for vegetables. Use 5-10-5 or 5-10-10.

NITROGEN helps leaves and stems to grow. It is most needed in the spring, and for leafy crops.

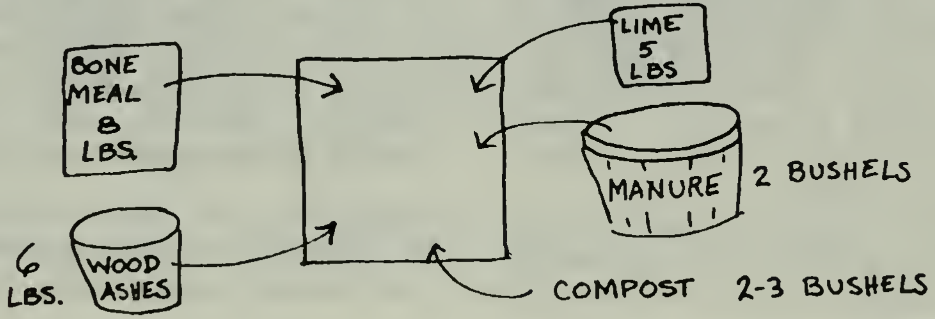


PHOSPHORUS helps the plant make fruits and seeds.

POTASSIUM helps to make strong roots and a healthy plant.

Use 5 pounds of 5-10-5 man-made fertilizer, along with lime and humus, on a 10 x 10 foot plot.

In the long run, natural or organic fertilizers enrich the soil and keep it healthy. Add these to a 10 x 10 plot:



2. Add LIME if your soil is too acid (p[illegible] is less than 6.4). Ground limestone is not expensive. A 10 x 10 plot might need 5 pounds. Spread it and rake in on a calm day so the wind won't blow it away.

3. Add HUMUS (finished compost) to make good, rich, loose loam. You can make your own humus, for free, and at the same time get rid of garden trash and kitchen garbage, by making COMPOST. Build an airy, fluffy, well-made compost pile. The sooner it "cooks", the sooner it is ready to put on the garden. See Chapter 7 for how to build a good compost heap.

HUMUS IS LIKE A SPONGE
GOOD SOIL IS 50 % SPACE

COMPOST
PEAT MOSS AND BROKEN-DOWN MULCH ALSO MAKE HUMUS

before you plant

LEAD AND CITY GARDENS

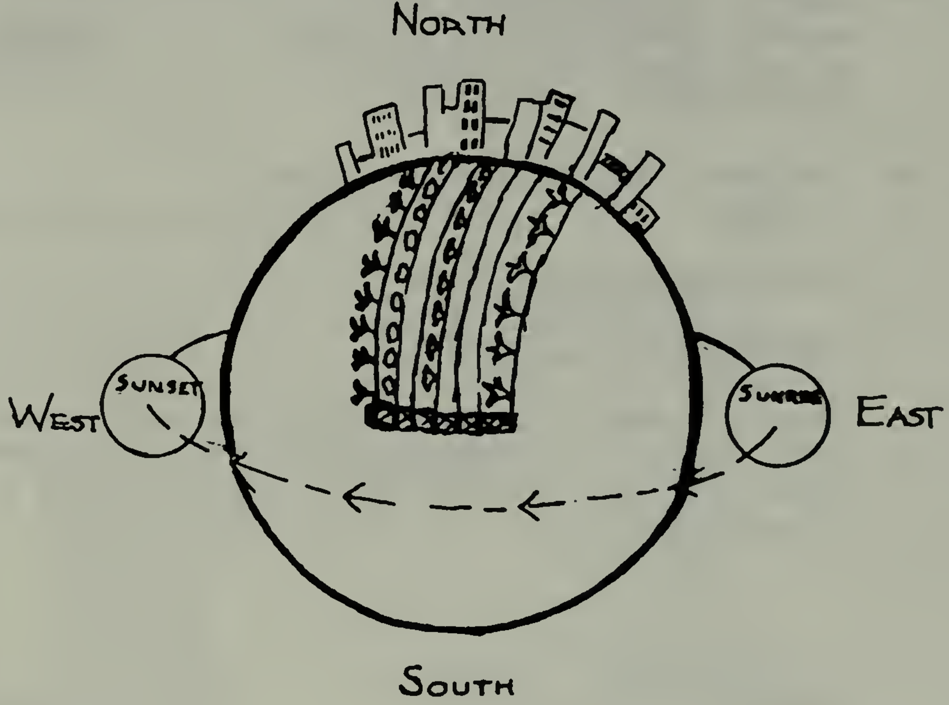
Lead is everywhere in the city. Lead gets into your garden from the air and the soil. Lead in the soil comes from debris and junk in the soil. Vegetables are now being tested to see if they take up lead from the soil. BEFORE STARTING A NEW CITY GARDEN, HAVE THE SOIL TESTED FOR LEAD. CALL 727-6633 (DEPARTMENT OF AGRICULTURE) TO ARRANGE TEST.

You should be careful to do these things:

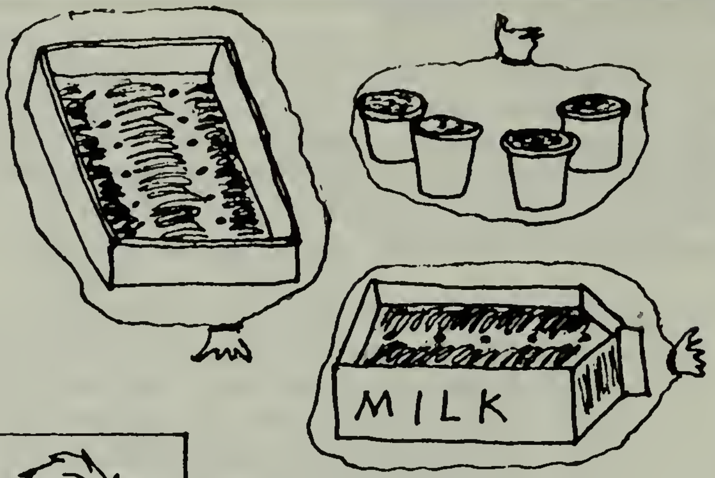
1. Wash all your vegetables.
2. Throw away outside leaves of lettuce and cabbage.
3. Scrub and peel root vegetables like carrots and potatoes.
4. Put your garden as far away from the street as possible.
5. In gardens near traffic, plant fruit crops like tomatoes nearest the street, root crops next, and leafy crops the farthest from the street.
6. Use fences, bushes and buildings to protect vegetables from traffic.
7. Have your children under 6 years tested free for lead poisoning in Boston, Cambridge, and Somerville. Call your Health Department.

BEFORE YOU PLANT:

1. Pick a spot with 6 hours of sunshine a day.
2. Plants should be in NORTH to SOUTH rows to get the most sun.
3. If you don't have enough sun, plant
    - lettuce
    - radishes
    - cabbage
    - spinach
    - beets
4. Plant tall vegetables like corn on the north side of the garden so they will not shade other vegetables.



planting seeds inside



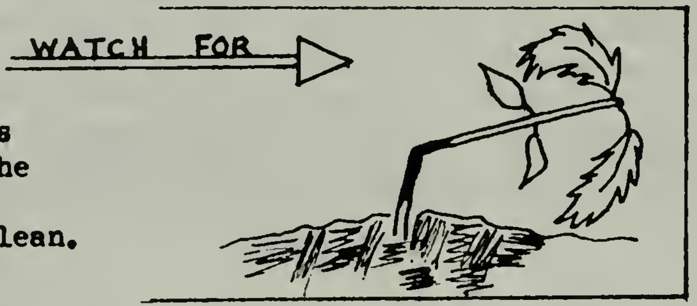
PLANT SEEDS

Plant your seeds inside the house in flat pans, paper cups, milk cartons or any clean container.

KEEP SOIL DAMP. PUT A PLASTIC BAG OVER CUPS OR
PANS UNTIL SEEDS SPROUT.
USE 1/4 STRENGTH LIQUID FERTILIZER ONCE A WEEK.

DAMPING OFF

A disease that kills small plants near the soil line.



A. Use clean soil to plant seeds in. Heat a pan of soil in the oven at 350 degrees for 30 minutes to make sure it is clean. Or sprinkle a thin layer of vermiculite on the surface.

B. Thin out seedlings in their trays or cups.

C. Don't over water.

HARDEN OFF

Put the seedlings in their containers outside in the shade for one or two weeks. They need to get used to air and light outside before you plant them in the ground.

transplanting seedlings

TRANSPLANT SEEDLINGS TO THE GARDEN

When the seedlings have one or two sets of true leaves they are ready for transplanting. The first leaves up are not true leaves but are called seedling leaves.

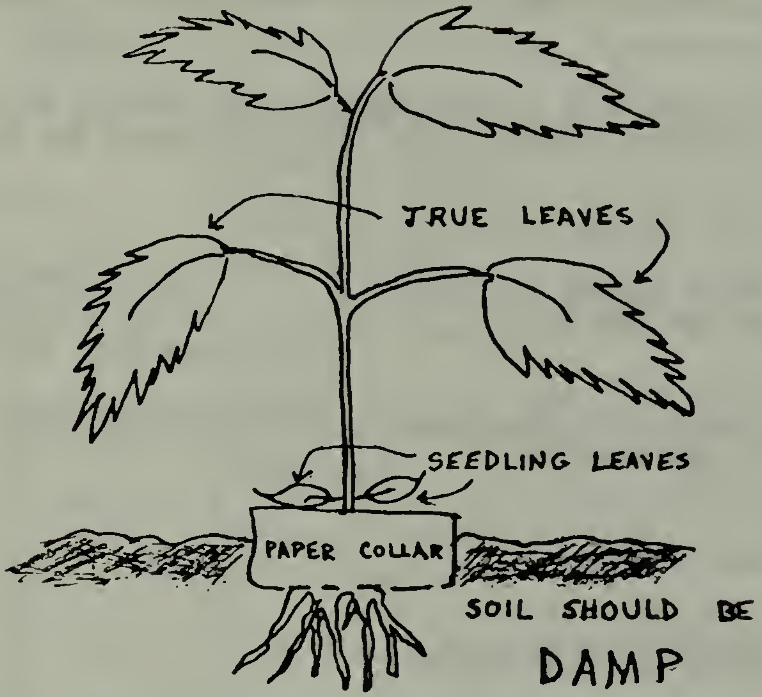
Plant seedlings a little deeper than they were in their containers.
Give the roots a lot of room in the ground.

Plant tall, thin plants deeper - up to their first set of true leaves. You can bury the seedling leaves.

Plant seedlings on a cloudy day or late afternoon so they won't dry out.

Use a paper cup to make a collar. Push it one inch into the soil to keep out cutworms.

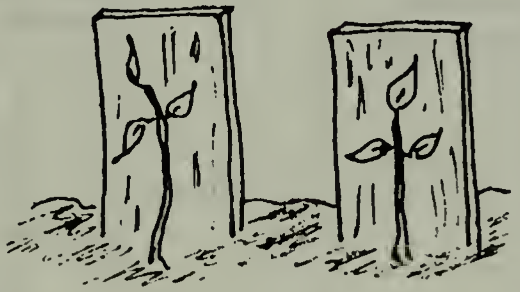
Water and fertilize after the plants are in the ground.



PROTECT your seedlings outside from the cold nights and too much wind.

Cut the bottom off a plastic milk jug and set it over the plant.

Put scraps of wood in the ground behind the plants.



Use two pieces of old wood leaning against each other like the letter A.

planting seeds outside

YOUR GROUND IS READY TO PLANT WHEN IT IS NO LONGER MUDDY.

1. If your dirt is hard and full of stones, you can do one of these things to get your soil ready for planting:

A.	OR	B.
Add 6 inches of topsoil if you can get it.		Dig a 5 inch deep hole for each plant and fill each hole with good soil.

   Then add to the topsoil, fertilizer and lime, and compost if you have it.

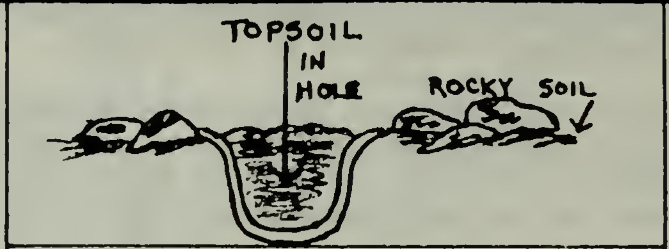
2. Rake Smooth.

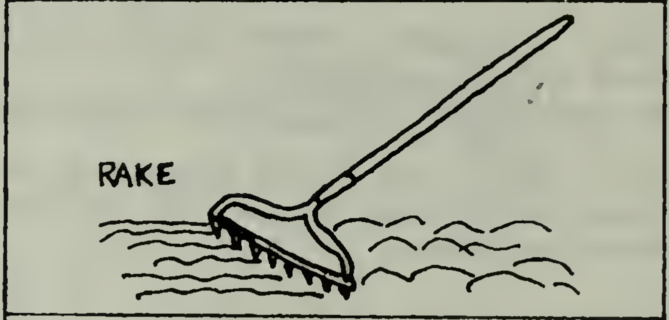
3. Water the soil lightly.

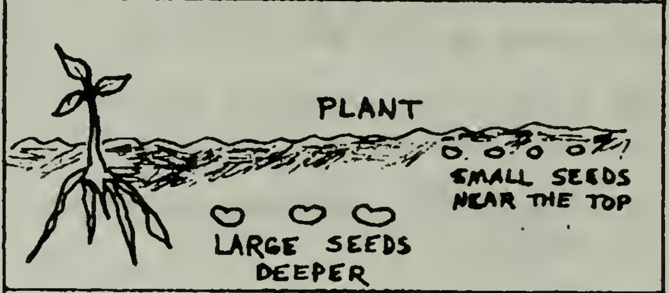
4. Plant the seeds. Cover each one with soil 3 times as thick as the seed.

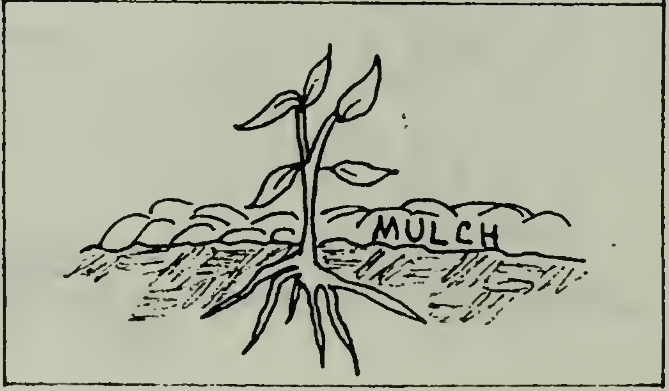
5. Water carefully. KEEP THE SOIL DAMP UNTIL THE SEEDS SPROUT or else the seeds will not grow.

6. When the new plants are about 4 inches high, put mulch around them to keep water in the soil.









planting guide

CROP	SEED INDOORS	SEED OUTDOORS OR TRANSPLANT	INCHES BETWEEN PLANTS	NUMBER OF PLANTINGS EACH SUMMER	HARVESTING (BEST TO PICK JUST BEFORE COOKING)
BEANS - LIMA		May 20 thru June 15	6"-8"	1-2	PICK WHEN PODS ARE WELL FILLED AND SPONGY TO SQUEEZE
BEANS - POLE		May 10 thru July 1	10"-12"	1	PICK WHEN FAIRLY SMALL AND FIRM FOR BEST FLAVOR
BEANS - SHELL		May 10 thru June 15	2"-4"	2	LEAVE ON VINES UNTIL PODS ARE WELL FILLED
BEANS - SNAP		May 25 thru July 1	2"-4"	3-4	PODS SHOULD SNAP READILY BUT THE TIPS STILL BEND
BEETS		April 20 - June 30	4"	3-4	HARVEST WHEN MEDIUM-SIZED. 1 1/4" - 2" IN DIAMETER
BROCCOLI	March 1 - June	May 1 - August 1	24"	2	PICK BEFORE FLOWERS TURN YELLOW
BRUSSEL SPROUTS		June or July	14"-24"	1	THE HEADS SHOULD BE FIRM, COMPACT AND BRIGHT GREEN
CABBAGE	March 15 - June 1	May 10 - June 20	18"-24"	3	PICK WHEN HEADS ARE FIRM WHEN SQUEEZED
CARROTS		April 20 - July 1	2"-3" thin out	3	ANY SIZE IS GOOD TO EAT
CAULIFLOWER		Buy seedlings from nursery	30"	1	PICK AS SOON AS HEADS FILL OUT
CHINA PEAS		April 1 thru May 15	2"	2	PICK OFF PODS AS THEY RIPEN TO KEEP PLANT PRODUCING
CHINESE CABBAGE (CRISPY CHOY)		July 1 - July 15-30	14"-18"	2	READY IN 6 WEEKS
CHARD		May and July 20	10"-15"	1	CUT THE OUTER LEAVES FROM PLANT WHILE GROWING

planting guide

CROP	SEED INDOORS	SEED OUTDOORS OR TRANSPLANT	INCHES BETWEEN PLANTS	NUMBER OF PLANTINGS EACH SUMMER	HARVESTING (BEST TO PICK JUST BEFORE COOKING)
COLLARDS		May and July 20	10"-15"	1	HARVEST LEAVES AS NEEDED
CORN		April 20 - June	4 Seeds per foot - thin 1 foot apart	1	PICK AT MILKY STAGE - PICK A KERNEL AND SQUEEZE IT FOR MILK
COWPEAS		April 1 - May 15	3"	2	PICK AT GREEN SHELL STAGE OR DRY FOR WINTER USE
CUCUMBER		May 20 - July 1	3 plants per mound	1	MEDIUM SIZE AND FIRM
EGGPLANT	April 10	June 1 - June 15	18"	1	READY WHEN HALF GROWN JUST BEFORE COLOR DULLS
KALE		April or July	15"	1	CUT OUTSIDE LEAVES OR CUT ENTIRE PLANT
LETTUCE - LEAF	March 1 - August 10	April 10 - August 20	10"-12"	2-4	WHEN LEAVES LARGE ENOUGH TO PICK
LETTUCE - HEAD	March 1 - June 1	April 10 - July 20	10"-15"	4	AS SOON AS HEADED
MUSTARD GREENS		April and August	2" thin to 4"	2	PICK LEAVES JUST BEFORE THEY MATURE
ONIONS	Feb. 2	April 15 - April 20	3"	1	1/2" IN DIAMETER FOR FRESH USE
PEAS		April 1 - May 15	3"	2	WHEN BRIGHT GREEN AND PODS ARE WELL FILLED
PEPPERS	March 1 - April 14	June 1 - June 15	12"-24"	1	SHINY GREEN AND FIRM HOT PEPPERS OVERALL RED
RADISHES		April and August	1" thin out	4	PICK WHEN FAIRLY SMALL AND YOUNG

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SPINACH		April 20 - August 15	3"-6"	3	USE BEFORE LEAVES GET OLD AND TOUGH
SQUASH - SUMMER	April 20	May 15 - June 20	36"	1	PICK WHEN MODERATE SIZE AND GOOD COLOR
SQUASH - WINTER		May 20 - June 5	60"	1	COLOR SHOULD BE GOOD FOR VARIETY AND RIND FIRM
TOMATOES	March 15 April 1	June 1 - July 1	24"	1	PICK WHEN COLOR IS GOOD ALL OVER
TURNIPS		April 1 Aug. 15	6"	1-2	MODERATE SIZE - FIRM AND REASONABLY HEAVY
WATERMELON		May 30 - June 10	60"	1	

herbs

CROP	HOW TO PLANT	HEIGHT	USE IN:
BASIL	Seed	1-2 feet	EGGS, CHEESE, FISH, SALAD, MEATS, SPAGHETTI
CHIVES	Buy Plant	1-2 feet	SALADS, CHEESE, EGG, SOUP
GARLIC	Buy Bulb	2-3 feet	STEWS, CHICKEN, SALAD, SAUCES
NASTURTIUM	Seed	15 inches	SALADS
OREGANO	Seed	2-2½ feet	ITALIAN, SPANISH, MEXICAN DISHES
PARSLEY	Seed	6-12 inches	VEGETABLES, MEATS, CASSEROLES, SOUPS, SALAD, EGGS
SAGE	Seed	2-3 feet	LAMB, SAUSAGE, CHEESE
TARRAGON	Buy Plant	1-2 feet	SALAD, EGG, CHEESE, FISH, DRESSING

water

HOW MUCH WATER?

Water must go deep into the soil to make good roots.

It is better to give your garden a gentle and complete soaking every week than a light wetting every day. Light sprinklings can be harmful because roots will grow close to the surface and dry out.

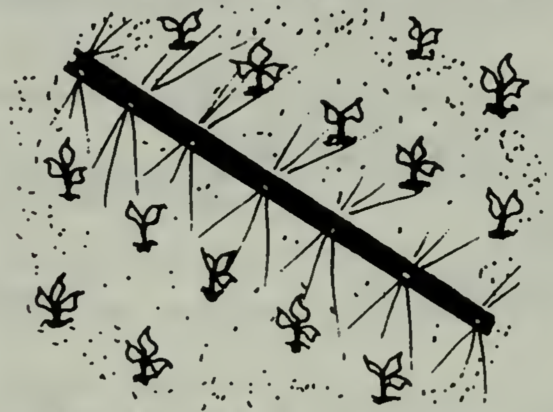
Dig into the soil after watering and measure to make sure the soil feels wet to a depth of at least 6 inches, or the length of the shovel blade.

WHEN TO WATER

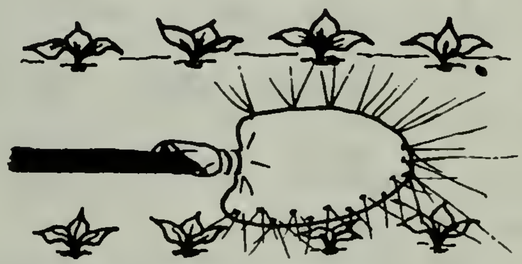
The most important time to water is when you plant seeds or new plants. Seeds will die if you do not keep the soil damp until they sprout. Young plants will die if their roots get dry.

Always put new plants in the ground late in the day so that the sun does not dry them out.

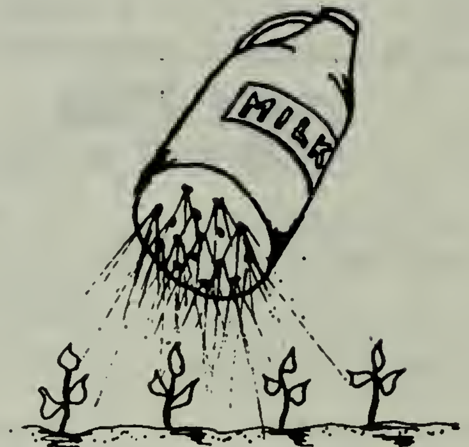
HOW TO WATER



Lay the hose on the ground. Put holes in the hose every 6 inches for a gentle spray.



Tie a cloth bag around the end of the hose. Put many small holes in the bag to get a gentle, even soaking.



Water around seedlings and new plants carefully. You can use a plastic bottle with small holes in the bottom.

where to get your water

1. Call your Little City Hall and ask them to connect water faucets to the nearest City water main.

2. Sometimes the City will put a "step-down" on the nearest hydrant so that a garden hose will fit it.

3. As a neighbor whose apartment is next to the garden to use his or her water. Sometimes the City will give this person an "abatement" on the water bill. This means that the water used for the garden is free of charge. Another way is for the gardeners to share the cost of the neighbor's water.

KEEP A CLEAN OIL DRUM OR GARBAGE CAN NEAR THE GARDEN TO COLLECT RAIN WATER OR FILL IT WITH A HOSE.

You can use this barrel with a cover to make a good MANURE DRINK (or COMPOST TEA) for your vegetables.

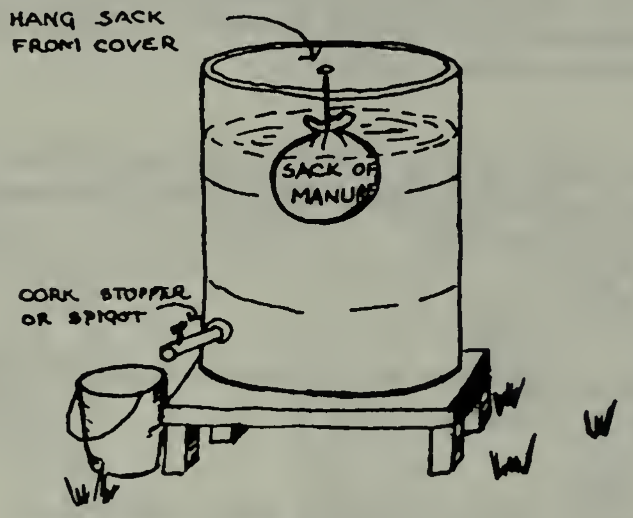
1. Put some animal manure or compost in a cloth sack and hang it inside an oil drum filled with water.

2. There should be at least three times as much water as manure.

3. It will be ready to use in five days.

4. Fill half your watering can with the mixture and the other half with plain water. Pour around vegetables.

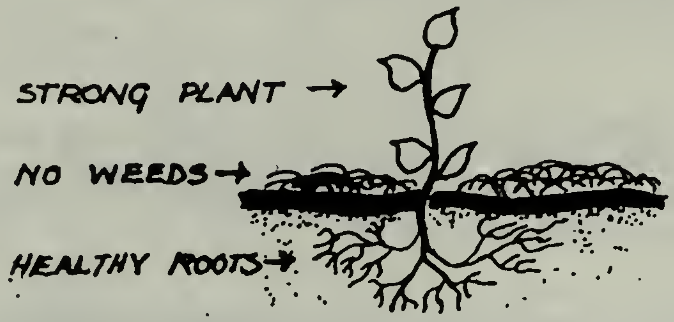
5. EMPTY THE DRUM OR BARREL EVERY TWO WEEKS TO KEEP AWAY MOSQUITOES.



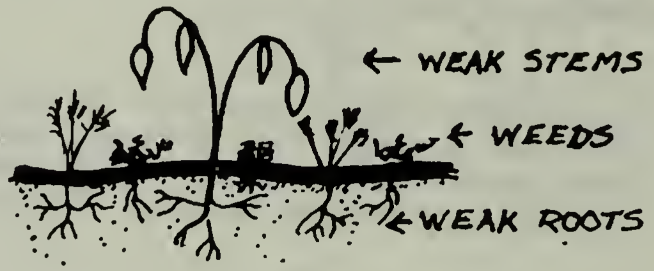
50 GALLON OIL DRUM

mulch is a must

MULCH IS A COVER ON TOP OF THE SOIL AROUND THE VEGETABLES.
IT KEEPS THE SOIL WET AND WEEDS OUT.



A PLANT WITH MULCH



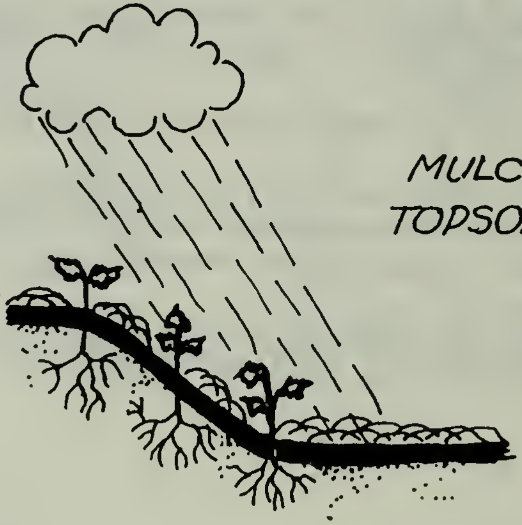
A PLANT WITHOUT MULCH

1. Organic mulch feeds the soil because it comes from plants or animals (such as sawdust from a tree or animal manure.)

2. Mulch keeps ground vegetables like squash, pumpkins and zucchini from resting on wet soil and rotting.

MULCH KEEPS VEGETABLES DRY

3. Mulch keeps your good topsoil from washing away in a heavy rain.



MULCH HOLDS TOPSOIL ON A HILL

4. Organic mulch keeps the soil temperature even. Plant roots stay cool on hot days and warm on cold nights.

some good mulches

ORGANIC MULCHES ARE MADE OF MATERIAL FROM A PLANT OR ANIMAL. THEY FEED THE SOIL. PUT THEM ON TOP OF THE SOIL WHEN THE PLANTS ARE ABOUT 5 INCHES TALL.

1. HAY

PUT IT ON 2 INCHES TO 4 INCHES THICK.

2. WOOD SHAVINGS

PUT THEM ON 4 INCHES THICK. MIX WITH COMPOST IF YOU HAVE IT TO KEEP NITROGEN IN THE SOIL.

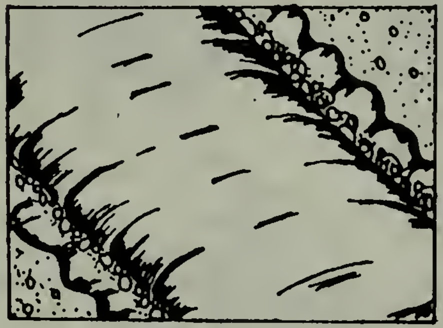
3. NEWSPAPERS

PUT THEM ON 10 PAGES THICK. HOLD DOWN WITH STONES OR BRICKS.

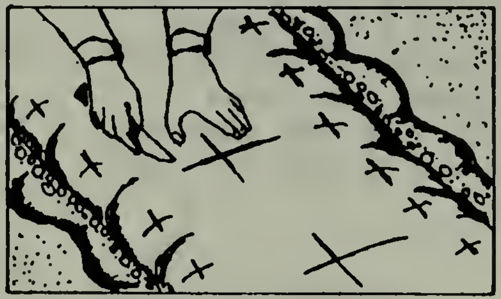
4. GRASS CLIPPINGS

PUT THEM ON 2 INCHES THICK. THEY ROT IF THEY ARE TOO THICK.

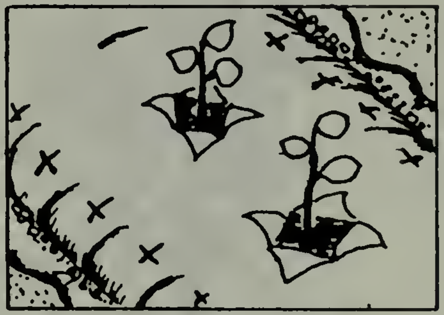
A MULCH THAT IS NOT ORGANIC: BLACK PLASTIC. IT KEEPS THE SOIL WARMER AND MAKES VEGETABLES, LIKE PUMPKINS AND SQUASH, RIPEN EARLIER. IT ALSO KEEPS THE SOIL WET AND KEEPS WEEDS OUT.



Put on plastic before planting. Hold edges down with soil.



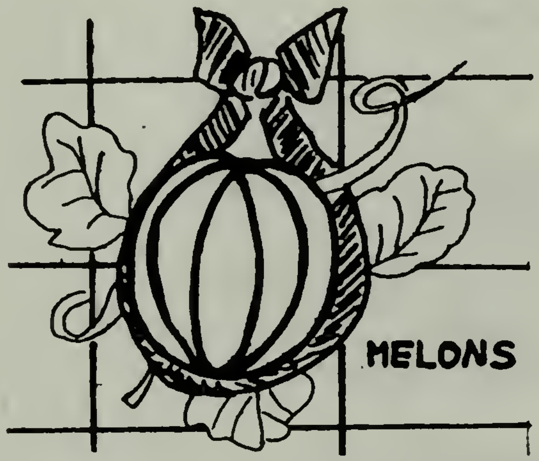
Cut X shaped slits to plant in.
Cut smaller slits along edges to let water in.



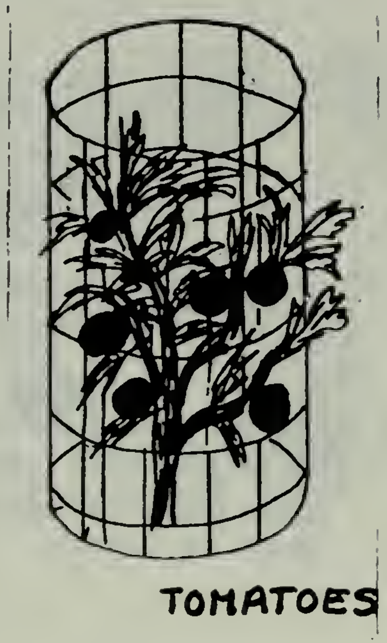
Open slits and plant seeds or plants.

stake to save space

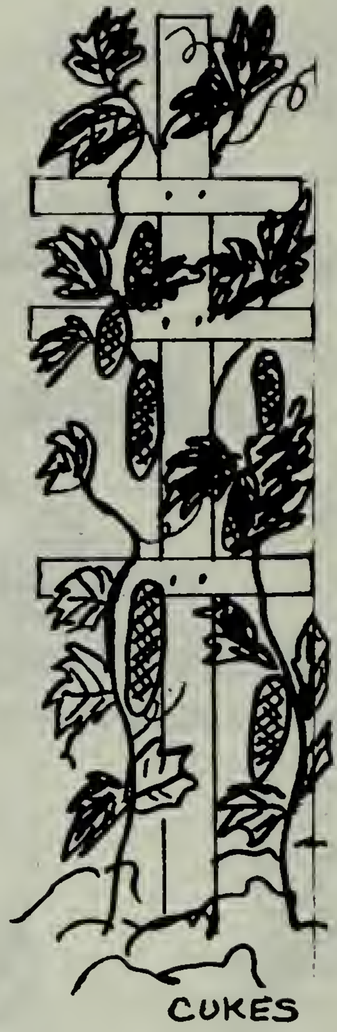
Most vegetables are grown on the ground and take up quite a bit of room. There are some vegetables and fruits that can be trained to grow up on stakes. Staking vegetables makes them easier to pick, keeps them away from the bugs on the ground, and gives other plants more room to grow.



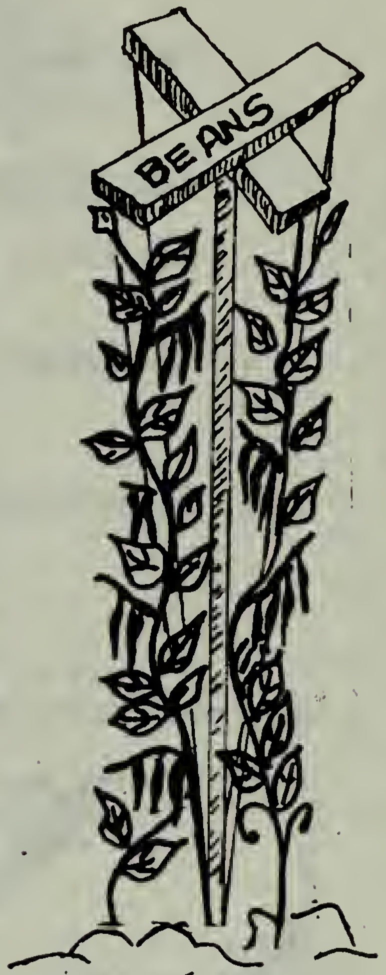
Put up a wire fence on the north side of the garden. Tie vines as they grow. Hold the fruit with onion sacks or pieces of cloth tied to the fence.



Make a circular tomato cage from 5 foot length of fence wire. Circle each plant with fence and tie wire ends together. Tie stems to wire as they grow.



Use a 6 foot pole with 18 inch pieces of wood nailed to it. Plant 4 seeds at foot of pole. Tie vines as they grow.



Use a 6 foot pole with 2 pieces of scrap lumber nailed across the top, like an X. Tie strings from the bottom of the pole to the top of the X on each side.

keep the garden healthy

SOME GOOD INSECTS JUST WAITING TO WORK FOR YOU:

ladybug

Eats Aphids
and Tree Lice

lacewing fly

Eats Aphids

praying mantis

Young eat Aphids,
Flies, small
insects. Adults
eat Beetles and
Caterpillers.

MANY WAYS TO HAVE A HEALTHY GARDEN - NATURALLY.

1. Keep the garden picked up - Put all weeds into compost pile.
2. Use the hose to knock off harmful bugs or pick them off with your fingers.
3. Put foil collars around young plants to protect them from cutworms - especially tomatoes.
4. Wash plants or spray them with soap and water to discourage insects.
5. Rolled up newspaper attracts earwigs in a garden - put paper in trash barrel.
6. Crop rotation. (See Page 32)
7. Get rid of diseased plants quickly. Do Not put them in compost pile.
8. Put wood ash around the base of plants to discourage maggots.

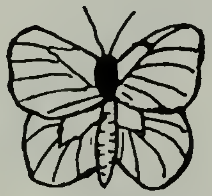
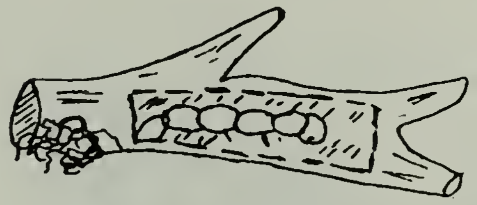
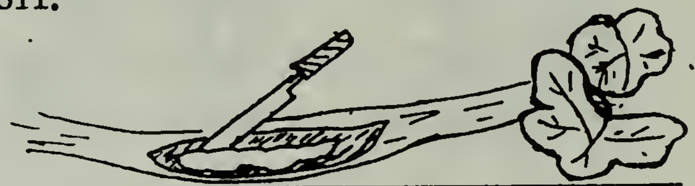
SOME FLOWERS WHICH HELP KEEP PESTS AWAY AS WELL AS ADDING SOME NICE COLOR TO YOUR GARDEN:

Marigolds

chives

nasturtiums

controlling vegetable pests

insect	crops	control
 MEXICAN BEAN BEETLE ½" long Attacks leaves from underneath. If not controlled will eat pod and stem too.	BEANS	Treat with Rotenone weekly if necessary. Make sure to get the underside of the leaf.
 CABBAGE WORM Adult butterfly lays eggs by hundreds on underside of leaves in spring. Worms hatch 1 week later. Reproduces 5 or 6 times a season.	BROCCOLI BRUSSEL SPROUTS CABBAGE CAULIFLOWER COLLARDS TURNIPS	Dust with Pyrethrum or Rotenone weekly. After harvest, clean up plant debris in which beetles might hibernate.
SQUASH VINE BORER 	CUCUMBER MELONS PUMPKINS SQUASH	Look for appearance after June 15. Dust with Rotenone to get nymphs when plant is young. If borer has already attacked plant, slit stem with knife and kill borer. Cover cut with damp soil. 
TOMATO HORNWORM This worm is hard to see because he is the same color as the plant. In 1-2 days he can eat the leaves off a whole plant.	TOMATOES	Pick off and kill the hornworm EXCEPT if it has tiny white dots on its back. These are the cocoons of a wasp parasite which eats hornworms.

community gardens

A community garden can be an organizing tool, knitting together a neighborhood and leading to other group action. Is your street run down, depressed, looking like nobody cares? Somebody does care. You. Probably others in your block or development do too.

If you want to garden and don't know how to start, begin by asking your neighbors if they are interested in forming a community group.

YOU NEED FREE LAND. THEN YOU PLAN.

IMPROVE SOIL - PLANT - WORK - HARVEST.

"How to Organize a Community Garden in Massachusetts" is a 40 page booklet now available from the Div. of Land Use, Mass. Dept. of Food and Agriculture

FINDING A COORDINATOR:

One of the keys to a successful community garden is finding an enthusiastic person willing to take responsibility for organizing the group, solving the initial problems and getting the garden started. Someone has to get the land, resolve start-up problems, get the gardeners, establish general rules and regulations. This person is the community garden coordinator.

A COORDINATOR IS:

- Someone with gardening know-how.
- A person with available transportation - for all the errand-running, especially in the beginning.
- A creative person - one who can come up with time-saving ideas. Some writing or public relations skills are helpful.
- A contact person. Someone who knows where to go for help.
- A person with patience. The kind of person who gets along easily with others.

Some of the best group gardens were started with neighbors finding a nearby empty lot and planting it.

If you have a site in mind, make sure you know the exact boundaries of the lot. Check the Assessor's Office at City Hall to find out who owns the land and if there are future plans for it.

Before developing a garden site, make sure it will be available to your group for a minimum of 3 to 5 years. It is not practical to start a garden on a site that the owners plan to build a parking lot on in the middle of your growing season.

If the land is privately owned, write or call the owner to get permission to use or rent the land, making sure you fully explain its intended use. It is very important that you are prepared to state your case for a community garden site. Make sure you have a strong case lined up before giving your sales pitch to a prospective land donor.

solving problems

TO GET AROUND THE INSURANCE HASSLE:

Because no public land can be used without the City being liable for damages, the community gardeners must all sign a waiver which releases the City from claims in the case of accident. PICK UP RELEASE FORM AT REVIVAL OFFICE, CITY HALL, if you live in Boston.

EVERYONE HAS VANDALISM PROBLEMS NOW AND THEN, BUT HERE ARE SOME WAYS TO MINIMIZE THEM:

Don't pick a neighborhood play area or pathway for your garden site.
Plant away from the edges the vegetables that kids like to throw.
Pick your vegetables as soon as they are ripe.
Put up a sign telling about the garden and list the coordinator's name and telephone number.
Fencing.
Ask your closest neighbor to keep a watchful eye on the garden and report to an appointed member, or the police, any problems on the site.
Notify the local police station about the garden.
Involve the kids in the area so they know it's their garden too.

Massachusetts has passed legislation to help community gardening programs and the Division of Agricultural Land Use acts as a clearinghouse for information. They will help groups get land, coordinate research on contaminants, act as a referral service to County Extension, and offer referral service on soil conservation.

WRITE: Massachusetts Department of Food and Agriculture
Division of Agricultural Land Use
100 Cambridge Street
Boston, Mass. 02202

or CALL THEM AT

617-727-6632

BOSTON URBAN GARDENERS (BUG) is on top of the gardening scene in the city of Boston; their staff is well informed about city resources, urban gardening techniques, and organizing advice. BUG is a citizen advocate group that welcomes members from all parts of the city. Their excellent booklet on Gardening Resources in the City is available from them at 250 Boylston St, Boston. Telephone: 267-4825

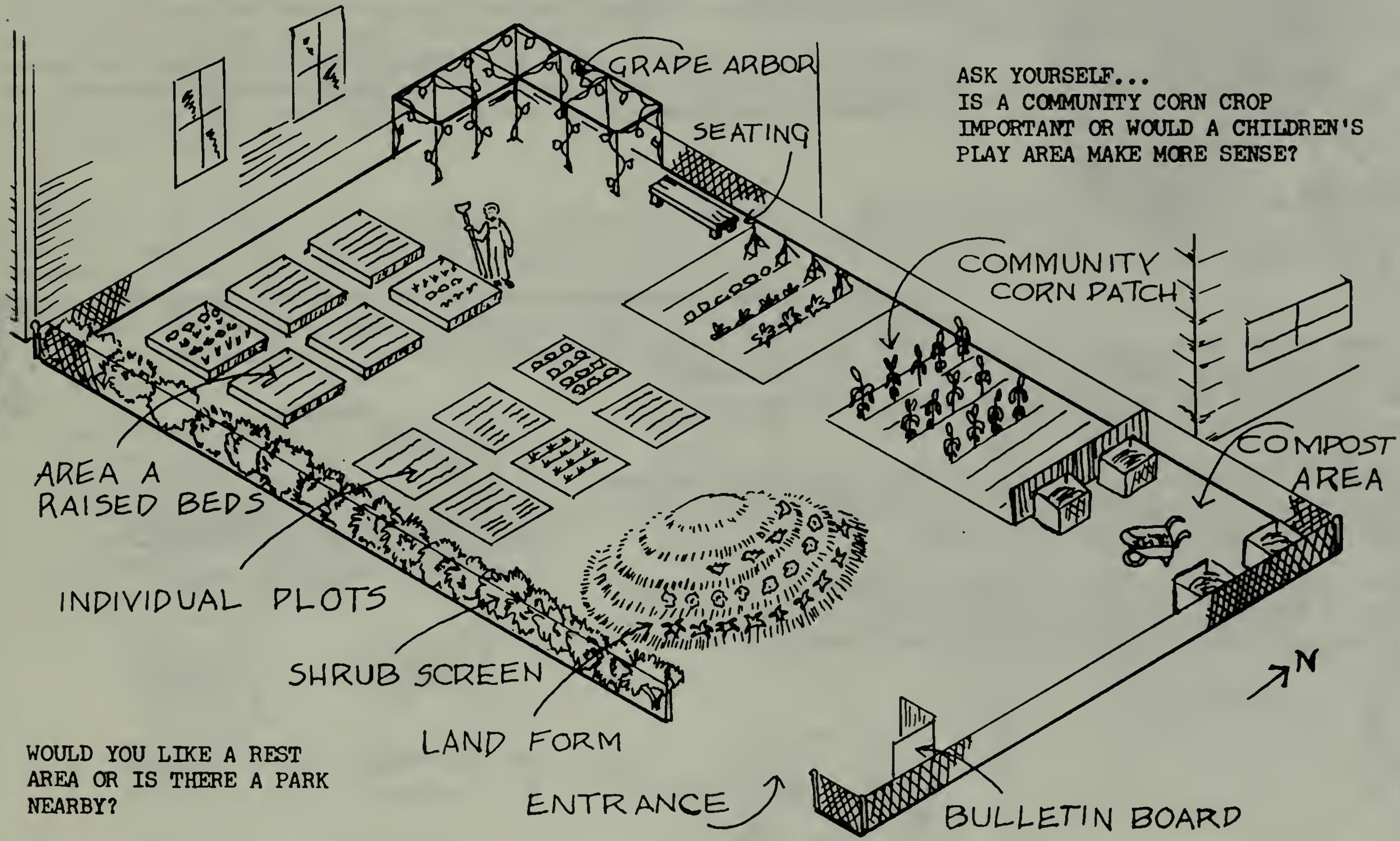
SUFFOLK COUNTY EXTENSION PROGRAM
100 Arlington Street
Boston, Mass.
Charles Yergatian, Director 482-0395

GREENSTOCK PROGRAM
same address as Extension Ser
Stu Jacobson , Director
482-9258

provides educational and horticultural information to individuals and groups in the areas of food production, preservation and utilization. They have informational leaflets, make on-site consultations (Suffolk County only), do field demonstrations in the garden season. They have on their staff horticulturalists, home economists, 4-H instructors and garden aides.

some ideas you can use

Once you have the site, you have to lay out the individual plots on paper. This must be based on the overall lot size and an estimate of the number of families gardening. Keep in mind some sections of the site are better suited than others for certain activities for very specific reasons. Take the sketch below as an example. AREA A might be wet...so raised beds would work. The perimeters may have rubble piled up with no way to get rid of it...a land form would solve the problem. (See section on Landforms p. 25) ANALYZE YOUR LOT AND MAKE IT WORK FOR THE INTERESTS OF THE GROUP.

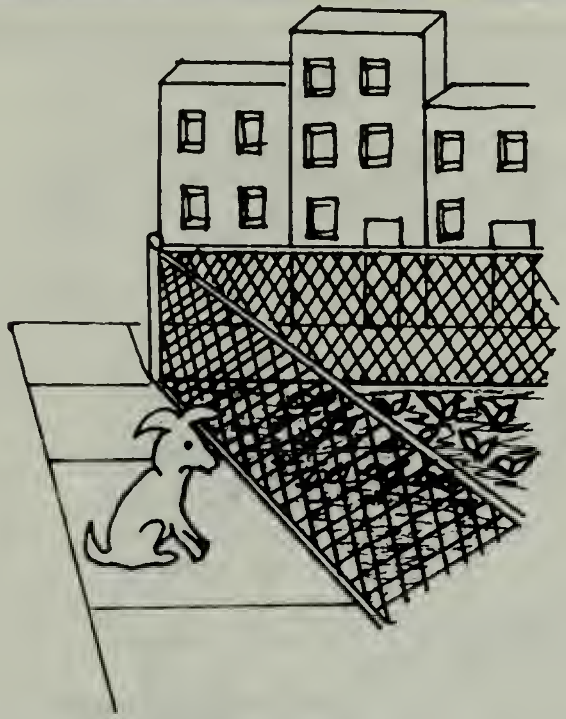


ASK YOURSELF...
IS A COMMUNITY CORN CROP IMPORTANT OR WOULD A CHILDREN'S PLAY AREA MAKE MORE SENSE?

WOULD YOU LIKE A REST AREA OR IS THERE A PARK NEARBY?

DO YOU NEED PLOTS LARGER THAN 10' x 10'?

screening the garden



SCREENING is important and necessary to the urban gardener. The right choice of screening materials can control animals, people taking short-cuts, and keep some of the pollution from car exhaust out of the garden.

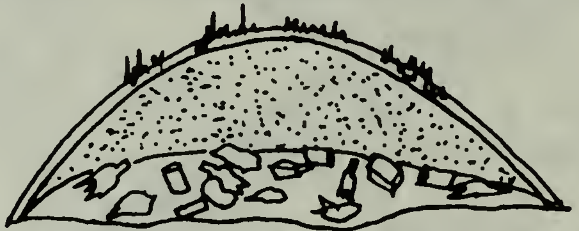
Screening also sets borders for your garden and adds protection and beauty. Good screening can protect from the force of the wind, and heat from sidewalks and nearby buildings. Screening can be expensive, but once in place there will be little future cost.

The three basic ways to screen a city garden are: landforms, plants and structures. These screens alone or together can enclose all or part of the garden.

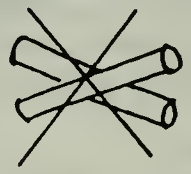
A LANDFORM or mound of earth, is a cheap way to screen your garden. The rubble that you must clear away such as rocks, bricks and glass can be used as the base of the landform. Soil from another part of the garden can be added to raise the earth mound as high as necessary. You can do this with shovels or with a bulldozer during the first clean-up of the garden. Old lead pipes and garbage should not be used.

An earth mound will settle and lose one-third (1/3) of its original height. A 6 foot high mound will settle to 4 feet. The base will be about 3 feet wide for every 1 foot high.

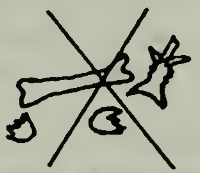
Since the soil used to form the landform will probably be in poor condition, 6 inches of topsoil should be added. When topsoil is scarce, use your best soil only in individual planting holes.



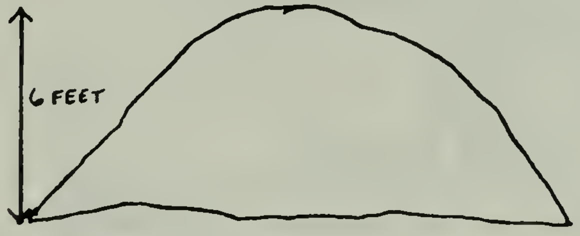
LANDFORM — RUBBLE AS BASE
(CUT-AWAY VIEW)



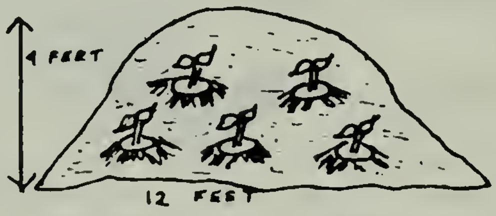
NO LEAD PIPES



NO GARBAGE

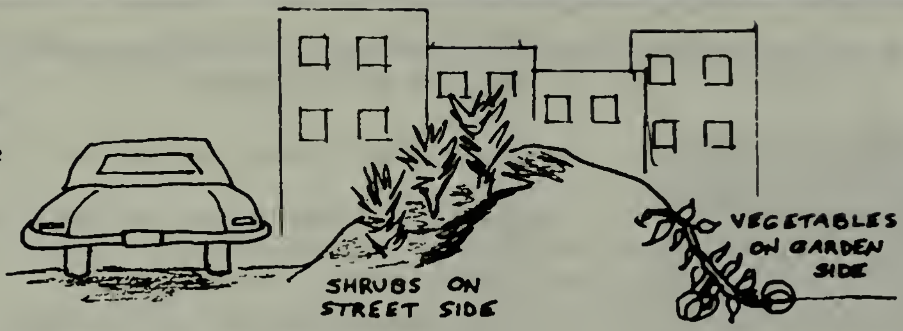


NEW LANDFORM



SETTLED LANDFORM

landforms and shrubs



A landform in combination with shrubs planted on the street side is the best way to control pollution from cars. The height of the mound prevents the polluted air from being blown directly onto the garden, and the shrubs act as a screen filtering the air and removing some of the polluted particles before they ever reach the vegetables. The inside slope of the earth mound can be used to plant vine crops such as cucumbers, squash and melons. Both sides of the landform should be planted with vegetables or some type of plants to keep the soil from washing away during rain and watering. Check the list of plants that grow well in the city under PLANTS.

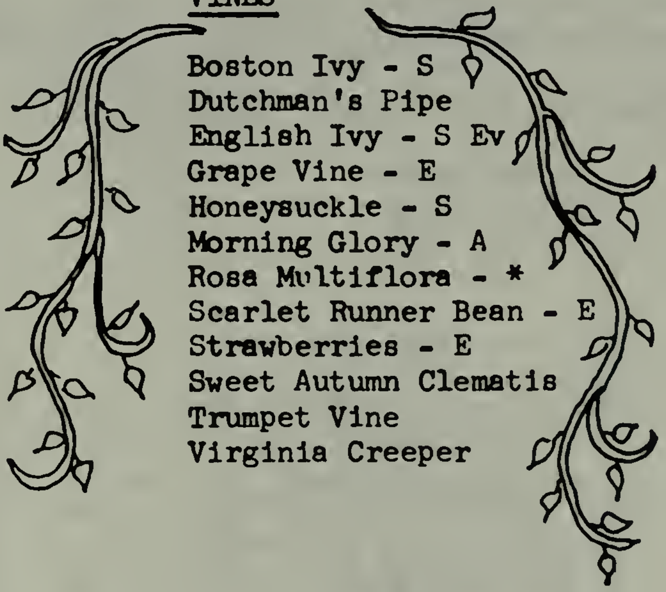
PLANTS are the second way of screening. Because evergreens are damaged by pollution, they are not good for the city vegetable garden. The following list contains many vines and shrubs that do well in the city. Shrubs with thorns are good barriers. Annual flowers like cleome and cosmosmake a quick and pretty one year screen. Plant the seeds in several close rows in the spring.

SHRUBS

Acanthopanax - S *
Blueberry - E
Cleome - A
Cosmos - A
Flowering Quince - *
Forsythia
Hydrangea
Japanese Barberry - S *

SHRUBS

Mock Orange
Privet - S
Raspberry - E
Rose-of-Sharon
Rugosa Rose - *
Siberian Peatree - N F
Spirea
Viburnum



VINES

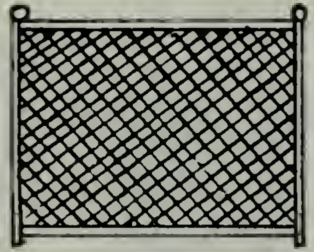
Boston Ivy - S
Dutchman's Pipe
English Ivy - S Ev
Grape Vine - E
Honeysuckle - S
Morning Glory - A
Rosa Multiflora - *
Scarlet Runner Bean - E
Strawberries - E
Sweet Autumn Clematis
Trumpet Vine
Virginia Creeper

* - Thorns
A - Annual
S - Shade
Ev - Evergreen
E - Edible
F - Nitrogen-fixing

fences for screens

STRUCTURES

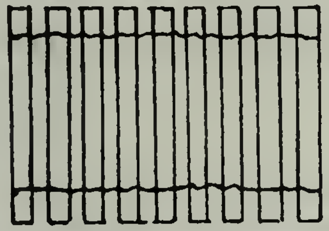
A third way to screen your city garden is with structures. These can be any type of fence, trellis or a wall of a building.



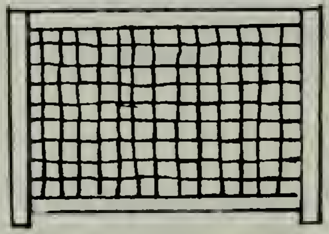
A chain link fence is the most common fence material used on a city lot.

Other types that might be used are:

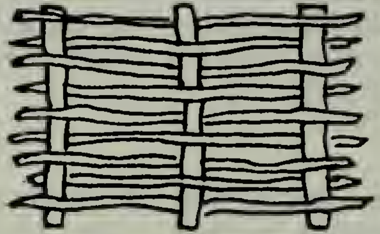
wood snow-fences



wood and wire



Woven stick fence

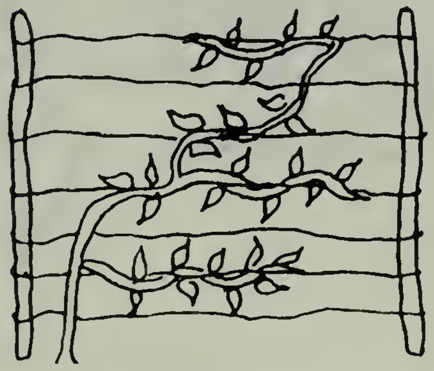


All of these fences and trellises can be used for climbing vegetables when they are away from the street. If they are on the street side of the garden the fence can support vines such as ivy, honeysuckle or morning glories (see Plants, page 26), and become a solid wall of greenery.

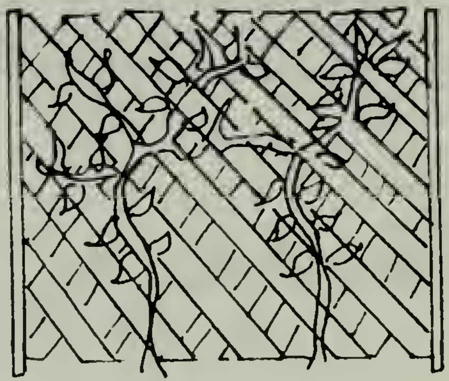
Trellises are useful against building walls. Hold the trellises up by putting the poles 2 feet deep into the ground, or rest the trellis against a wall.

Some easy ways to make trellises are:

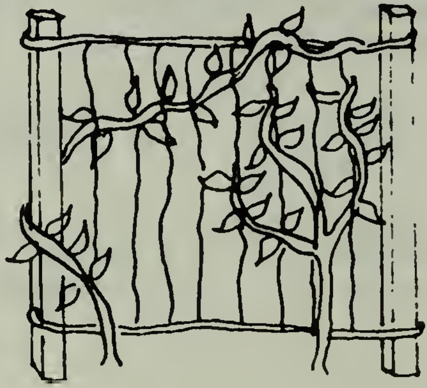
wooden poles
with string



slats from snow fences or
wood scraps nailed together



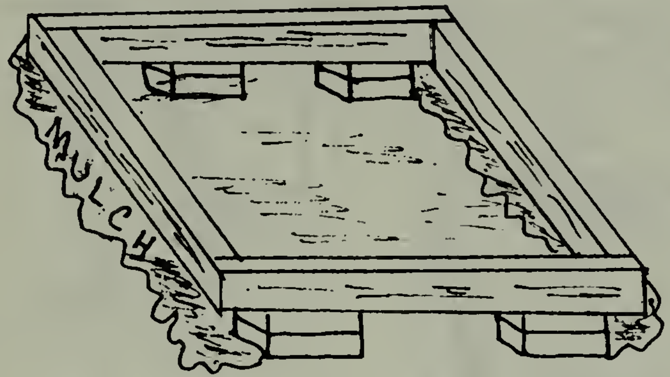
poles with wire across
the top and bottom;
strings run up and down



an early start with cold frames

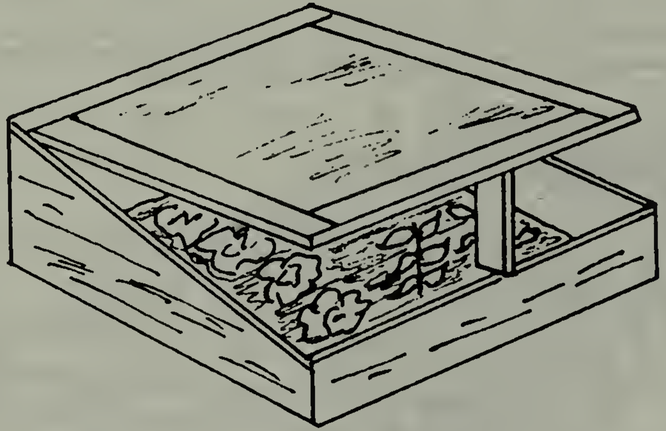
Cold frames give your garden a head start on the growing season. You can put seedlings outside in a cold frame before your garden is warm enough for planting. Seeds for salad greens, like lettuce and radishes, can be planted under a cold frame in APRIL! Use them again the same way in the fall when the weather is too cold to plant seeds in the garden.

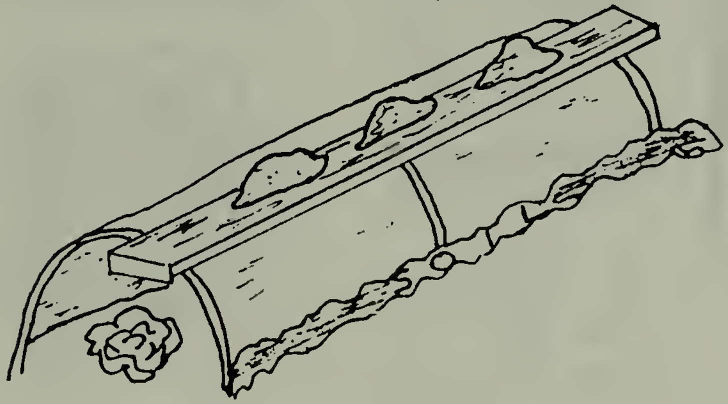
Water plants under cold frames often.



Put an old window on bricks or boards and leave the spaces between the bricks open for air. Close in the other two sides with mulch.

This cold frame is a wood frame with a lid. For a lid use an old window or make a wood frame and nail a piece of clear plastic to it. Use a stick to hold the lid open on hot days so air can get in.





This cold frame is made by sticking bent wire coat hangers into the ground. Cover the whole thing with clear plastic and tape the plastic to the coat hangers. Leave it open at both ends. Hold the plastic down with soil or rocks along the sides, and hold the cold frame down with a long board or rocks. Cover the ends on a cold night.

RAISED BEDS

When the ground is poor or shallow, use a raised bed. HOLD BACK THE SOIL WITH 2 INCH BY 8 INCH BOARDS, RAILROAD TIES OR CINDER BLOCK. Two small beds 4 feet by 8 feet will fit on a plot 10 feet by 10 feet with room for a 2 foot path in the middle.

> KEEP THE GROUND LEVEL AND 1/2 INCH BELOW THE TOP EDGE OF THE BOARDS TO KEEP SOIL AND WATER FROM LEAKING OUT.

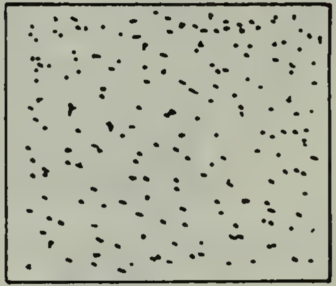
Raised beds look neat, drain better, and are easy to take care of.

INTENSIVE PLANTING

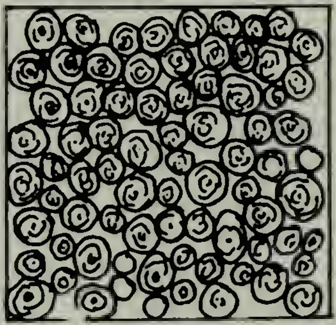
The intensive way of planting is a good system for small spaces. Instead of planting in rows, you scatter the seeds over a small area, about 4 feet by 5 feet. USE MORE COMPOST THAN YOU WOULD FOR ROW PLANTING.

Scatter the seeds to use all the space and then thin out as the plants grow. The mature plants should just touch each other on all sides.

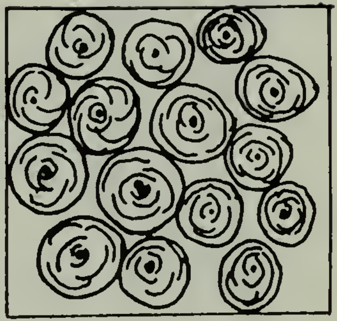
SCATTER SEEDS



PULL OUT EVERY OTHER PLANT TO EAT OR TO COMPOST.



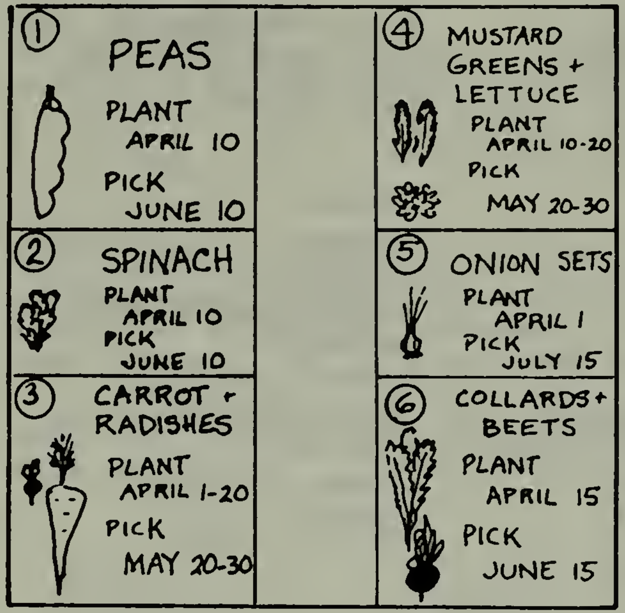
MATURE PLANTS



successive planting

STRETCH THE GROWING SEASON AND HAVE A CONTINUOUS SUPPLY OF FRESH VEGETABLES FOR YOUR TABLE

COOL WEATHER CROPS IN 6 RAISED BEDS



① PEAS
PLANT APRIL 10
PICK JUNE 10

② SPINACH
PLANT APRIL 10
PICK JUNE 10

③ CARROT + RADISHES
PLANT APRIL 1-20
PICK MAY 20-30

④ MUSTARD GREENS + LETTUCE
PLANT APRIL 10-20
PICK MAY 20-30

⑤ ONION SETS
PLANT APRIL 1
PICK JULY 15

⑥ COLLARDS + BEETS
PLANT APRIL 15
PICK JUNE 15

THE GARDEN IN SPRING

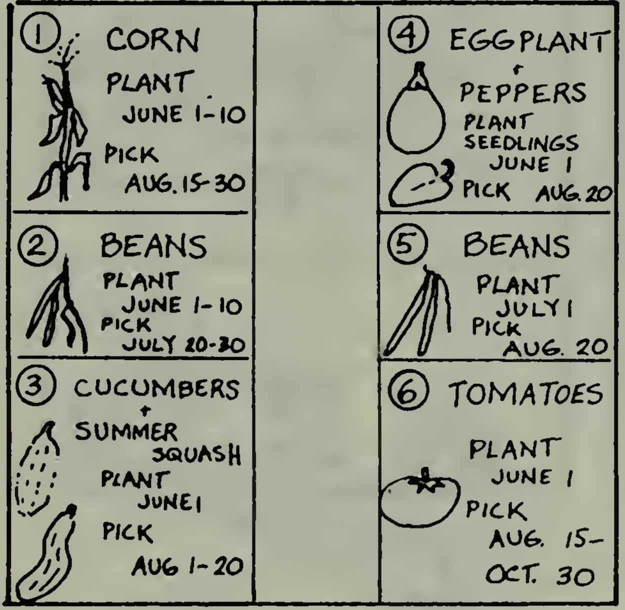
Most people want enough vegetables for their dinner each day. Only if you plan to can or freeze, do you want the whole crop to ripen at once. Successive planting means:

1) planting a row or bed of a crop and then planting another row or bed of the same crop a week or ten days later to stretch out the harvest.
2) As soon as one crop or a part of a crop is harvested plant a new one in its place.

When you look at your seed package, notice how many days that variety of the vegetable takes to mature, and whether it likes cool or hot weather. Dwarf or midget vegetables mature faster. Be sure to put back into the soil what the first crop uses up, by adding compost or fertilizer before replanting the area.

IN 1 YEAR YOU CAN GROW 3 CROPS ON THE SAME PIECE OF LAND 10 FEET LONG + 10 FEET WIDE

HEAT-LOVING CROPS REPLACE COOL WEATHER



① CORN
PLANT JUNE 1-10
PICK AUG. 15-30

② BEANS
PLANT JUNE 1-10
PICK JULY 20-30

③ CUCUMBERS + SUMMER SQUASH
PLANT JUNE 1
PICK AUG 1-20

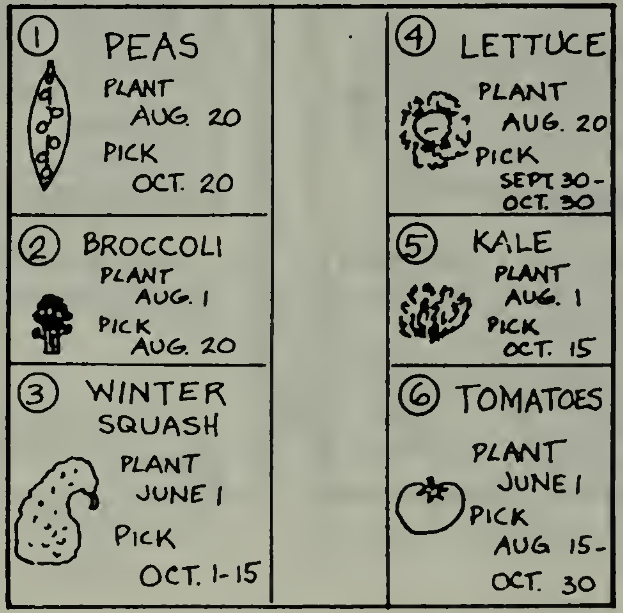
④ EGGPLANT + PEPPERS
PLANT SEEDLINGS JUNE 1
PICK AUG. 20

⑤ BEANS
PLANT JULY 1
PICK AUG. 20

⑥ TOMATOES
PLANT JUNE 1
PICK AUG. 15- OCT. 30

THE SAME GARDEN IN SUMMER

COOL WEATHER CROPS REPLACE HEAT-LOVING CROPS



① PEAS
PLANT AUG. 20
PICK OCT. 20

② BROCCOLI
PLANT AUG. 1
PICK AUG. 20

③ WINTER SQUASH
PLANT JUNE 1
PICK OCT. 1-15

④ LETTUCE
PLANT AUG. 20
PICK SEPT 30- OCT. 30

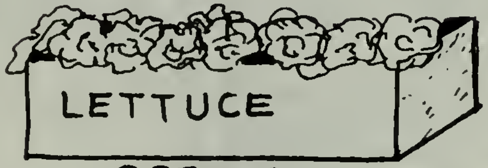
⑤ KALE
PLANT AUG. 1
PICK OCT. 15

⑥ TOMATOES
PLANT JUNE 1
PICK AUG 15- OCT. 30

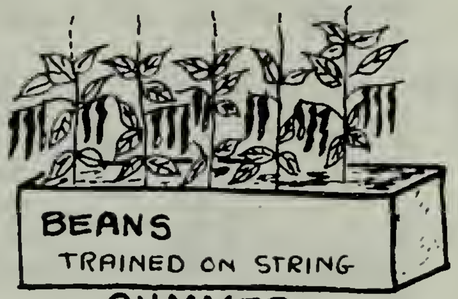
THE SAME GARDEN IN FALL

successive planting

EARLY SPRING	MID-SPRING	EARLY SUMMER	MID-SUMMER TO FALL
PLANT AS SOON AS GROUND CAN BE WORKED AND IS NOT TOO WET	PLANT AFTER LATE FROST	PLANT WHEN SOIL AND WEATHER ARE WARM	SECOND PLANTING OF VEGETABLES THAT LIKE COOL WEATHER
Broccoli plants	Bush beans	Bush beans	Broccoli
Cabbage plants	Carrots	Carrots	Cabbage
Kohlrabi	Cauliflower	Lima beans	Kohlrabi
Lettuce	Corn (early)	Corn	Lettuce (early fall)
Radishes	Beets	Beets	Radishes
Mustard greens	Swiss Chard	Cucumbers	Mustard greens
Kale	Potatoes (early)	Eggplant plants	Kale (early fall)
Peas	Tomato seeds	Potatoes (for winter)	Bush beans
Parsley	Onion seeds	Tomato plants	Brussel sprouts
Onion sets		Pepper plants	Turnips
Spinach		Pumpkin	
		Squash	



SPRING



SUMMER

FALL

A quick-maturing crop can also be planted between slow-growing vegetables. This makes use of every bit of space and is called INTERCROPPING.

PULL RADISHES WHEN READY TO EAT
MAKES ROOM FOR CARROTS

LETTUCE AND PEPPERS GROWING TOGETHER

rotation

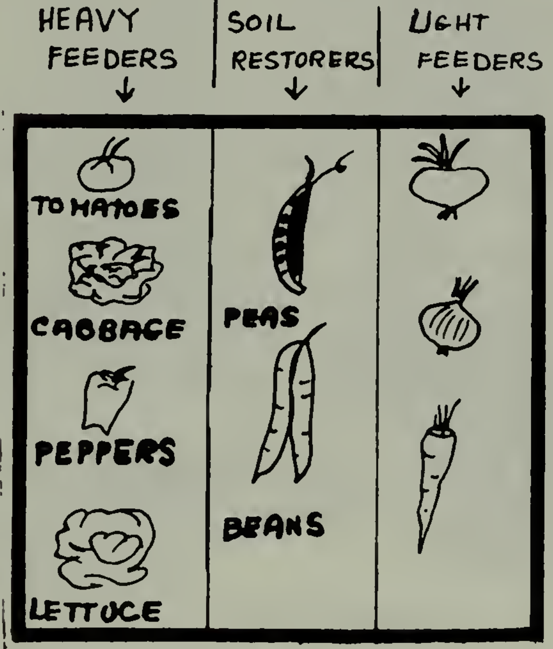
THERE ARE TWO REASONS TO CHANGE THE PLANTING LOCATION OF VEGETABLES FROM YEAR TO YEAR:

1. KEEP SOIL HEALTHY
   To prevent disease build-up in the soil try not to plant tomatoes, squash, peppers and other vegetables in the same area year after year. One way to rotate your vegetables is to divide the garden in half (from north to south) and change all the vegetables grown on one side of the garden to the other side the next year.

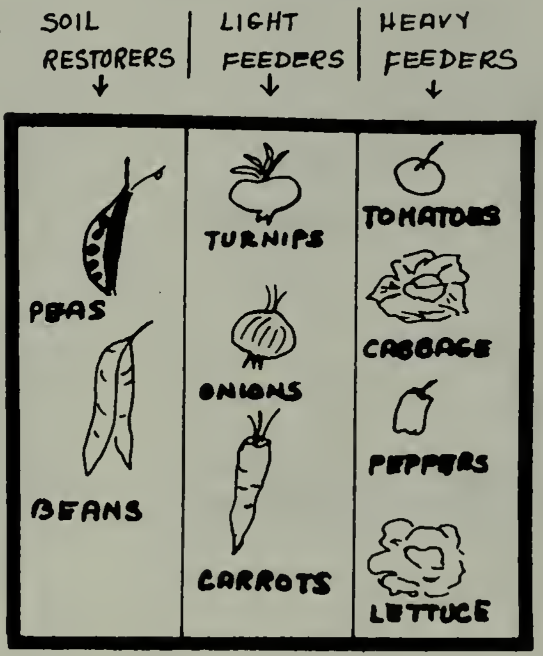
2. KEEP SOIL RICH
   Some plants take large amounts of certain minerals from the soil. Leaf and fruit vegetables are called heavy feeders, take nitrogen out of the soil. Root vegetables are light feeders and take potash out of the soil. Legumes, like peas and beans, are soil restorers and put nitrogen back into the soil. It is a good idea to plant soil restorers where you last planted heavy feeders.

   HERE IS A WAY TO ROTATE HEAVY FEEDERS, LIGHT FEEDERS AND SOIL RESTORERS FROM YEAR TO YEAR IN THE SAME GARDEN:

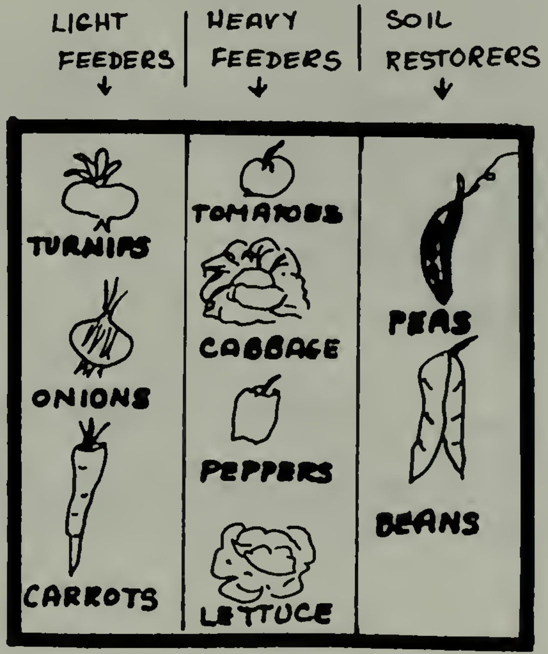
FIRST YEAR



SECOND YEAR



THIRD YEAR



Some other heavy feeders are: corn kale squash
okra cukes melons

Light feeders include: beets
radishes
potatoes

putting the garden to bed

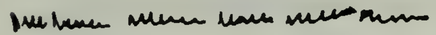
IN THE FALL

1. After frost has killed the last of the vegetables, pull up the plants and either put them in the compost heap, or dig them into the soil.

2. Fall is a good time to make a soil test. Add lime or fertilizer if you need it and dig it in.

3. Dig in mulch or any other organic material you have. This is called sheet composting.

4. Plant a winter cover crop to restore the soil. This is called green manuring. Rye grass is easy to find and not expensive. Plant 1/2 pound to cover a garden 10 feet long and 10 feet wide. Cover lightly with soil so the birds won't eat the seeds.



GRASS MAKES THE
GARDEN LOOK GOOD
IN WINTER

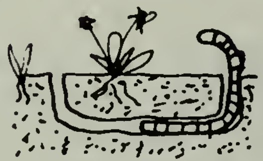
PUT UP A
SIGN FOR
THE WINTER

5. Clean, sharpen and put away tools.

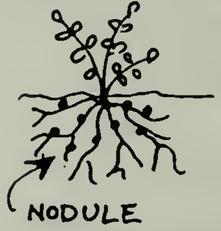
6. In the spring turn over the rye grass and dig it in at least 2 weeks before planting your first vegetables.

FREE SOIL RESTORERS

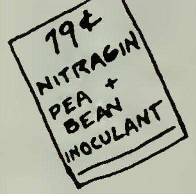
SNOW fixes nitrogen from the air into the soil.



EARTHWORMS love composted and mulched soil. Their manure is rich in minerals.



LEGUMES (peas and beans) have nodules on their roots which fix nitrogen in the soil. After harvesting your peas, pull up the plant and look at the little white bumps. Buy a pea and bean inoculant to speed up nitrogen-fixing bacteria's work.



GREEN MANURE gives an extra boost of nitrogen when it is needed most.

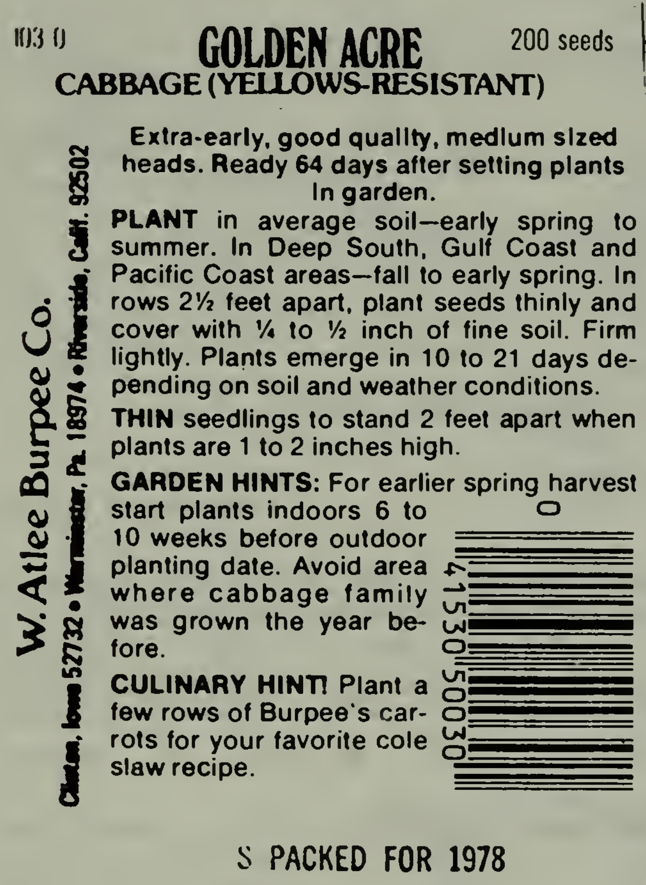
seeds

CATALOGS:

Use reliable seed houses as a source of your seed supply. Seeds held over from year to year may produce a poor vegetable or none at all. Send for your FREE catalogs each January - then order early. See the next page for names and addresses of good seed companies.

VARIETIES:

Seed varieties are very important because they tell you the difference in the seeds of the same vegetable. For example:



103 0 **GOLDEN ACRE** 200 seeds

CABBAGE (YELLOWS-RESISTANT)

W. Atlee Burpee Co.

Clinton, Iowa 52732 • Warminster, Pa. 18974 • Riverside, Calif. 92502

Extra-early, good quality, medium sized heads. Ready 64 days after setting plants in garden.

PLANT in average soil—early spring to summer. In Deep South, Gulf Coast and Pacific Coast areas—fall to early spring. In rows 2½ feet apart, plant seeds thinly and cover with ¼ to ½ inch of fine soil. Firm lightly. Plants emerge in 10 to 21 days depending on soil and weather conditions.

THIN seedlings to stand 2 feet apart when plants are 1 to 2 inches high.

GARDEN HINTS: For earlier spring harvest start plants indoors 6 to 10 weeks before outdoor planting date. Avoid area where cabbage family was grown the year before.

CULINARY HINT! Plant a few rows of Burpee's carrots for your favorite cole slaw recipe.

0 41530 50030

S PACKED FOR 1978

1. Number of Seeds
2. Wilt Resistant
3. Matures Quickly
4. Size of Vegetable
5. Number of Days to Harvest
6. Drought Resistant
7. Likes Heat
8. Planting Dates
9. When to Thin Out
10. If Crop Should Be Rotated
11. Good for Canning
12. Good for Preserving
13. Ways to Eat Vegetable
14. Germination Test Date

[illegible] SEED VARIETY IS "ALL AMERICAN"

seed catalogues

HERE ARE SOME OF THE SEED CATALOGS AVAILABLE TO YOU:

1. Joseph Harris Co. Inc., Moreton Farm, Rochester, N.Y. 14624
   Seeds especially for Northeastern States.
   Free pamphlet "Care of Home Gardens".

2. Burpee Seed Co., 300 Park Ave., Warminster, Pa. 18991
   Catalog illustrates garden supplies as well as vegetables and flowers.
   Free pamphlet "Gardening for Pleasure".

3. Seedway, Inc., Hall, New York 14463
   Catalog contains planting instructions.

4. J.E. Miller Nurseries, Inc., Canadaigua, N.Y. 14423
   Specializes in berries and fruit trees - dwarf as well as standard.

5. Stokes Seed Co. Inc., Box 548, Buffalo, N.Y. 14240
   Catalog includes seeds which have not been treated with a fungicide.

6. Nichols Garden Nursery, 1190 North Pacific Highway, Albany, Oregon 97321
   Specializes in organic gardening.
   Many oriental vegetables.

7. Otis S. Twilley, Salisbury, Maryland 21801
   Specializes in Seeds for Southerners (okra, blackeye peas, etc.)

8. Capriland's Herb Farm, Silver Street, Coventry, Conn. 06238

9. Farmer Seed and Nursery Co., Faribault, Minn. 55021
   Special interest to early maturing vegetables.
   Free folder "How to Grow a Kitchen Herb Garden".

10. Kitazawa Seed Co., A 356 W Taylor St., San Jose, Calif. 95110
    Oriental vegetables.

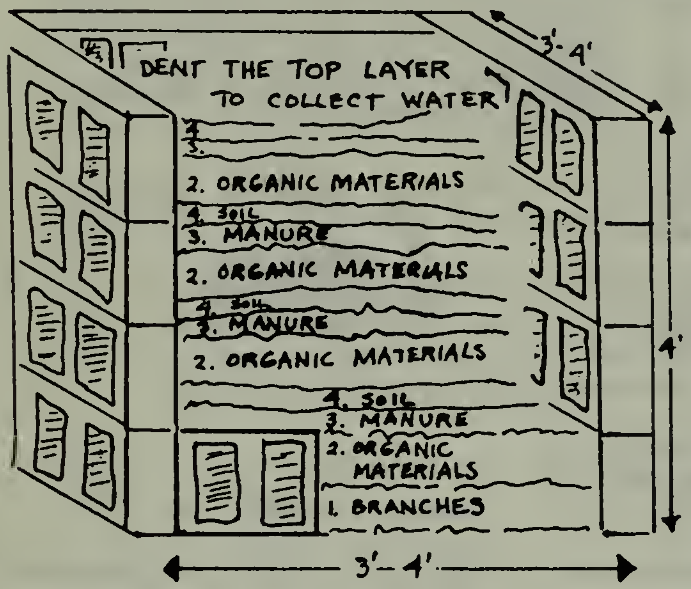
11. Thompson and Morgan, Box 100, Farmingdale, N.J. 07727
    Beautiful color photographs, Best catalog for hard-to-find varieties, greenhouse varieties, and seeds for houseplants.

12. Park's Flower and Vegetable Catalog, 98 Cokesbury Rd., Greenwood, S.C. 29647
    Emphasis on flowers.

how to make compost

COMPOST IS a mix of plant materials and manures (called organic matter) which breaks down into a soil conditioner and fertilizer called humus.

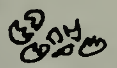
TO BUILD A PILE READY FOR USE IN 3-6 MONTHS

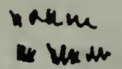


FIRST LAYER - branches or stemmy weeds 6 inches thick on the bottom of the pile to let air in. Pile will smell without air.

SECOND LAYER - 6 inches of mixed organic materials using twice as much green stuff as dry. The smaller the pieces the faster they will break down.

Do not use meat or fat scraps. They attract rats, dogs and flies.


EGG SHELLS


GRASS CLIPPINGS

THIRD LAYER - Add thin layer of material rich in nitrogen - manure or hair clippings. You can buy dried blood or 5-10-5 fertilizer to use if you can't get manure.

CHICKEN MANURE

FOURTH LAYER - Thin layer of soil to add bacteria.

THE COMPOST SANDWICH

Repeat second, third and fourth layers to the top of the bin.
Water lightly after adding each layer.
Make heap 3 - 4 feet wide and 4 feet high.
Turn occasionally with a pitchfork.

SOIL FROM GARDEN

TO MAKE A PILE TO USE IN 2 WEEKS

1. Follow directions above.
2. Cut material up in very small pieces or shred it.
3. Turn the heap over every three days.

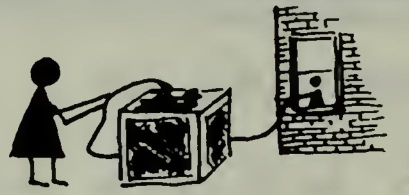
You can untie the turkey wire roll and set it up again next to the heap. Then fork the compost over into the cage.

what makes compost work

YOU NEED

MOISTURE

The compost should feel like a squeezed-out sponge, so water as often as needed. The materials will only break down when they are damp. (But a wet soggy heap will smell. Put a cover over the top if it rains day after day.)



&

AIR

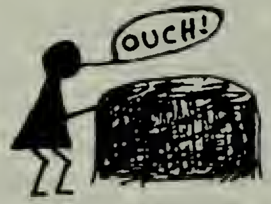
Turn the compost heap over with a fork. The compost heats up most in the center, so put what was on the sides and top into the middle when you turn it.

A TIGHT ROLL OF CHICKEN WIRE MAKES A GOOD AIR SHAFT OR POKE HOLES IN THE PILE.

&

HEAT

In a few days the compost will heat up and be too hot to hold your hand in it. If it doesn't heat up, add more nitrogen (pour over a bucket of water with a little manure, fish emulsion or fertilizer in it.) A cover of black plastic on the top uses solar energy to help keep the pile hot and steamy in colder weather. Heat kills weed seeds and germs.



&

LARGE PILE OF SMALL PIECES

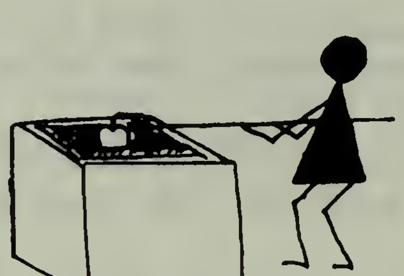
The pile must be large enough to get hot enough to "cook". A good size is 4 feet high and 3 feet wide. Bacteria can reach all sides of small pieces fast. The smaller the pieces the easier the heap is to turn over.

&

NITROGEN AND BACTERIA

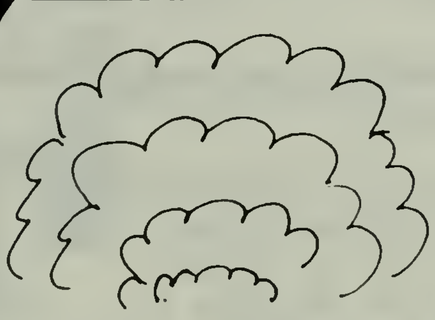
Bacteria need nitrogen to work. Bacteria are the microorganisms which break down the compost. They are found naturally in soil. You do not need to buy an "activator" to get compost started.

Screen compost for planting seedlings and for house plants. Sterilize first. Return coarse leftovers to the heap or use them as mulch.



↓TO MAKE↓

FINISHED COMPOST



A pile of finished compost will be about one half the size of the original pile. When it has cooled down and is light, fluffy and crumbly, it is ready to use. You will not be able to tell what it was to begin with. It is now "black gold".

what to put in compost

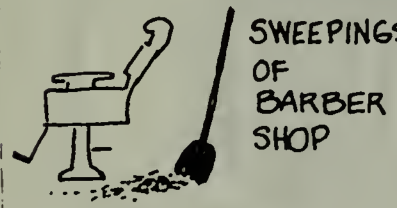
FOR NITROGEN:

GREEN MATERIALS:

WEEDS GARDEN WASTES GREEN LEAVES	especially new growth, but put in everything that is not diseased. Do not use vines of squash family.
GRASS CLIPPINGS	except where lawn was treated with weed killer
VEGETABLE & FRUIT LEFTOVERS	from markets or your kitchen. Cut up in small pieces.

HIGH POWER CONCENTRATES FOR SPEEDY BREAKDOWN

HAIR	from barber shop, beauty parlor, hair brush. 7 pounds of hair has as much nitrogen in it as 100 pounds of manure.
DRIED BLOOD or BLOOD MEAL COTTONSEED MEAL	expensive, but a little goes a long way.
FISH EMULSION	a liquid you mix with water for a compost booster or fertilizer. Less expensive.



CUT UP OLD CELERY STALKS

WHAT NOT TO PUT IN COMPOST HEAP	WHAT MAKES THE BEST COMPOST? VARIETY
meat or fat scraps which would attract dogs, flies or rats	use as many different things as possible

FOR BULK:

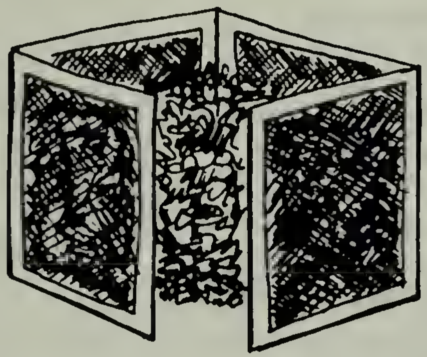
DRY MATERIALS:

SAW DUST	free from high school shop classes, lumber yards, wood workers
LEAVES	shred or mix well as they mat down
MANURE	horse manure from riding stables bird cage cleanings
STRAW	often mixed with horse manure
SEAWEED	only from unpolluted beaches. Bring home a bagful from Nantasket or Nahant.

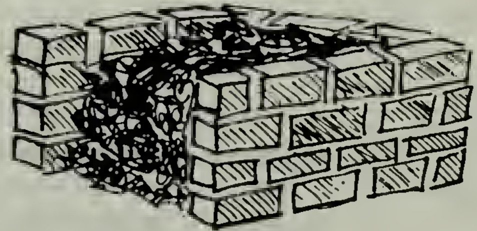
WHAT MAKES SOME THINGS WORK FASTER THAN OTHERS?

AGE	SIZE
The longer a plant took to grow, the longer it takes to break down.	The tinier the pieces of organic matter, the faster they break down.
A tree takes 50 years to grow. Saw dust breaks down in 3 months.	Tea leaves Coffee grounds Crushed shells Hair
Grass takes 3 weeks to grow. Grass clippings break down in 3 days.	Wood ashes from fireplaces Rock dust (from pottasium and phosphorus.)

how to make a compost bin

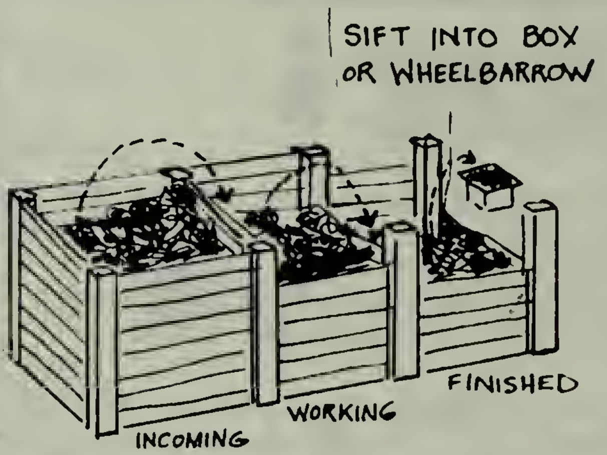


4 PANELS OF WIRE MESH ON WOOD FRAME ARE TIED TOGETHER. MOVABLE. EASY TO MAKE AND USE.



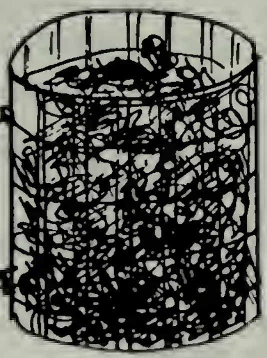
CONCRETE BLOCKS

STACK LEAVING 4 INCH GAPS BETWEEN BLOCKS. NO MORTAR SO EASILY PUT UP, TAKEN APART.


SIFT INTO BOX OR WHEELBARROW
FINISHED
WORKING
INCOMING

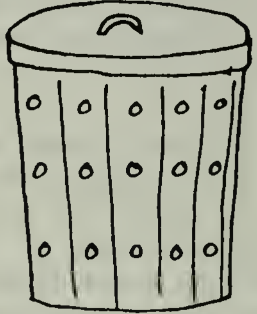
3 PART WOOD BIN

BETWEEN POSTS, SLATS LIFT OUT TO ADJUST HEIGHT.



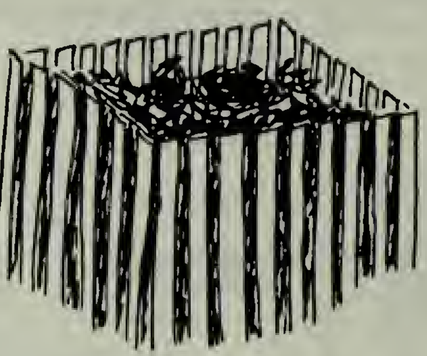
TURKEY WIRE MESH

TIED TOGETHER AT ENDS. VERY LIGHT WEIGHT.



TRASH CAN

MAKE HOLES FOR GOOD AIR FLOW. USE IN SMALL SPACE.



PALETTES OR SNOW FENCING

TIED OR WIRED TOGETHER.

where to get free help

IF	CALL	
If you need land or you need advice on lead or want to start a community garden, or you want advice on the Mass. Seed Program, and urban Farmers' Markets and community land trusts	727-6632	Division of Agri. Land Use, Massachusetts Dept. of Agriculture, 100 Cambridge St., Boston 02202 Soil Lead sampling information and instructions; Booklet on "Organizing a Community Garden in Massachusetts"
If your tomatoes are rotten at one end	891-0650	Massachusetts Suburban Experimental Station, 240 Beaver St., Waltham 02154. Free soil testing. Expert advice on plant diseases and insect problems.
If you wonder whether roses will grow in your garden	536-1720	Massachusetts Horticultural Society, 300 Massachusetts Ave., Boston 02115
	862-2380	Middlesex County Extension Service, Concord, Mass.
If you would like to plant an apple tree	524-1718	Arnold Arboretum, The Arborway, Jamaica Plain
If you have a problem and don't know who to call	267-4825	B.U.G. can help. Boston Urban Gardeners, Boston A clearing house for gardening groups.
A Team of Garden Assistants.	482-9258	GREENSTOCK
If you would like to learn about canning and freezing	482-0395	Suffolk County Extension Service, 100 Arlington St., Boston
Urban greenhouse		Southwest Corridor Community Farm, Lamartine St., Jamaica Plain
If you would like to see good vegetable garden	783-0609	The Christian Herter Center, 1175 Soldiers Field Rd., Allston
	267-6210	The Fenway "Victory Garden" Association

To find out more about gardening, courses are given at:	Boston Parks & Recreation Dept., City Greenhouses, Franklin Park. Massachusetts Horticultural Society, 300 Mass. Ave., Boston. Habitat, 10 Juniper Road, Belmont 02178, 489-3850.

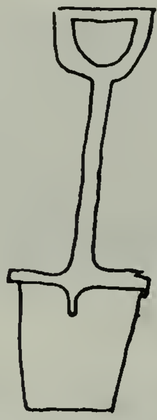
Boston Public Library has many books on gardening. Three good ones on vegetable gardening are:

The City People's Book of Raising Food by Helga & William Olkowski, Rodale Press, $4.95
The Postage Stamp Garden Book, Duane Newcomb, $4.95
Sunset Guide to Organic Gardening, Sunset Press, $2.95

Free or very inexpensive booklets printed by the government will be available through the Suffolk County Extension Service.

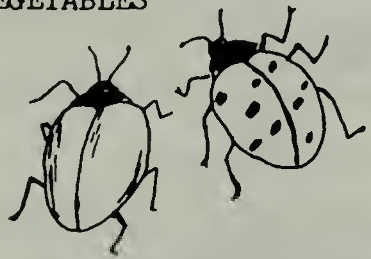
where to get supplies

TO BUY TOOLS, FERTILIZERS



1. Becoming a member of B.U.G. allows you to order garden supplies at a discount, and gives you a 10% discount at some garden supply stores. 1 year membership cost $1. Call 267- 4825
2. Check out your neighborhood hardware stores.

IF YOU'D LIKE TO ZAP THE BUGS THAT ARE EATING YOUR VEGETABLES



Natural biological controls:

1. Lady bugs: John D. Lyon or send to W. Atlee Burpee, P.O. Box 6929
   Philadelphia, Pa. 19132
2. Praying Mantis Egg Cases: send to Eastern Biological Control
   Box 379, Jackson, N.J. 08527
3. Lacewing flies: send to Fairfax Biological Laboratory
   Clinton Corner, N.Y. 12514
4. Bacillus thuringiensis: called Dipel, Biotrol or Thuricide
   go to John D. Lyon or Agway.

IF YOU NEED HORSE MANURE

Free:
1. Revere/Saugus Riding Academy, 122 Morris St., N. Revere
   322-7788. Off Route 1. Check at office first. 7a.m.-10p.m.
2. Ponkapoag Outdoor Center, Blue Hill River Rd., Canton
   696-4520. Telephone first.

50¢ for any size container. Bring your own box, bag or trash barrel:
1. Forest Hills Riding Stable, 19 Lotus St., Jamaica Plain.
2. The Paddocks Stable, 1010 Hillside, Milton, 696-1884.

FOR OTHER SOURCES OF MATERIALS FOR COMPOST

Use your imagination. Never come to the garden empty-handed.
Bring something for the compost heap each time.
More compost means a healthy soil and better vegetables.

ORGANIZATIONS

Boston Urban Gardeners
250 Boylston St.
Boston, Mass. 267-4825

(Newsletter, community gardening
information, land trusts)

Gardens for All
180 Flynn Ave.
Burlington, Vt 05401
(publications, newsletter)

Institute for Community Economics,
120 Boylston St.
Boston, Mass.
(land trust and community development)

Mass Assn. of Biological Farmers and
Gardeners
Box 191
Hopkinton, Ma. 01748
(organic gardening information)

Mass. Horticultural Society
300 Mass. Ave.
Boston, Mass. 536-9280
(library, school programs, information)

Urban Solar Energy Association
21 Burnside Ave.
Somerville, Mass. 02144
(resource list of Boston area solar
greenhouses which can be visited,
newsletter, greenhouse assistance)

Northeast Solar Energy Center
470 Atlantic Ave.
Boston, Mass. 02110
(solar greenhouse information including:
brochure, plan, and growing manual)
list of Mass. solar greenhouse builders

NEWSLETTERS

The Source: the Newsletter of
the Massachusetts Association
of Biological Farmers and
Gardeners (MABFG)
Box 575
Northampton, Mass. 01060

Greenflash: the Newsletter of
Greenstock
Suffolk County Extension Service
UMass Downtown Center
100 Arlington St.
Boston, Mass. 02125

BUG: the Boston Urban Gardeners
Newsletter
66 Hereford St.
Boston, Mass. 02115

New Roots: Information Sharing
appropriate technologies in the
Northeast
P.O. Box 548
Greenfield, Mass. 01301

Massachusetts Farmers Bulletin
286 Old Lancaster Road
Sudbury, Mass. 01776

4/1979

GOOD GARDENING PRACTICES WHERE LEAD IS A CONCERN

Environmental pollution is a problem in every U.S. city. It affects our wildlife, waterways, trees and humans through pollutants in the air, water and food supply. Inevitably, city gardens are affected too, and one known pollutant is lead.

Lead is everywhere in the city: in the air from automobile exhaust, in the water from lead pipes, on houses with lead-base paints, and in the soil where lead-painted buildings once stood, as well as in many everyday products such as newspapers, color-printed food wrappers and even in some canned products and commercially grown foods.

> Children under age six are most affected by lead. Children are especially susceptible because of their small size and stage of development. Furthermore, they are likely to chew or suck on lead-carrying materials. Lead contributes to possible damage to the kidneys, brain and other body systems. For most children, the best advice is to eliminate the sources of lead in their environment. For information on lead paint removal, call the Massachusetts Childhood Lead Poisoning Prevention Program at (617) 522-3700. In Boston call the Boston Environmental Health Program at Boston City Hospital at (617) 424-5965.

The Suffolk County Extension Service has a lead and pH soil testing service available to urban gardeners and is coordinating this service with others involved in studies which will help provide information which we now lack about the problem of lead pollution. Members include representatives of the Waltham Suburban Experiment Station of the University of Massachusetts, U.S. Environmental Protection Agency, Massachusetts Childhood Lead Poisoning Prevention Program, Harvard School of Public Health, Massachusetts Department of Food and Agriculture, and Boston Urban Gardeners, Inc. (BUG).

The Urban Gardeners Task Force on Toxicity meets with scientists, agriculture agents, gardeners, and interested agency people to keep informed on any problems and remedies for contamination in the urban garden. Anyone is welcome to attend. To be on the mailing list, please contact the Division of Agricultural Land Use, Mass. Dept. Food and Agri., 100 Cambridge St., Boston 02202

LEAD and pH TEST

SOIL SAMPLING INSTRUCTIONS

1. MATERIALS NEEDED:

   A. Clean trowel.
   B. Clean, dry plastic container. Use a sandwich-size baggie with a tie or zip-lock seal, or use a plastic container with a tightly fitted lid.
   C. Tape or labels for containers.
   D. Pen for labeling.

2. NUMBER OF SAMPLES TO TAKE:

   A. Backyard garden (10' x 15' or so) take TWO samples about 10' apart.
   B. For larger gardens (20' x 30' or more) take FIVE samples, one from each corner and one from the middle of the garden.

3. HOW TO TAKE EACH SAMPLE:

   A. With a trowel dig a hole 6" deep. See Fig. 1.
   B. Take a 1" slice from the side of the hole, from top to bottom (see Fig. 2), and place in a clean, dry container. ONE CUP should be collected for each sample. Label.
   C. Repeat process for each sample.

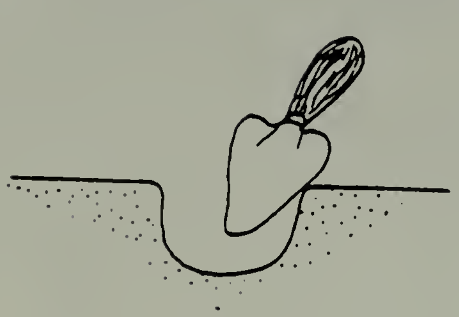


Fig. 1

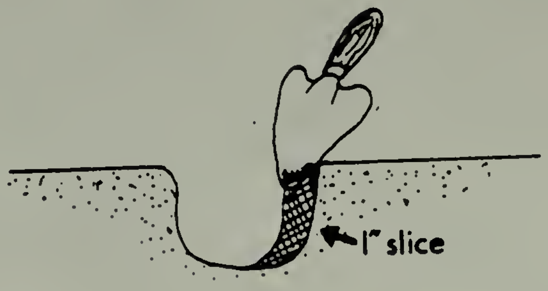


Fig. 2

4. LABELING:

   A. Fill out information sheet and draw a map of your garden to show where each sample was taken.
   B. Label soil samples and match numbers on map to correspond to numbers on containers.
   C. DO NOT put labels inside container with the soil. Tape labels on outside of container and make sure they are stuck on well.

5. WHERE TO SEND SAMPLES:

   A. Pack securely and mail or bring soil samples, information sheet, and map to:

GREENSTOCK Program
Suffolk County Extension Service
University of Massachusetts Downtown Center
100 Arlington Street, Room 0908
Boston, MA 02125
Tel. 482-9258

NOTE: Allow a minimum of 3 weeks for test results. You will be notified of test results with appropriate recommendations for good gardening practices.

SOIL SAMPLE INFORMATION SHEET
FOR LEAD TEST

NAME____ DATE____________________

HOME ADDRESS____

PHONE (DAY)__________________________ (NIGHT)____________________________

SIZE OF GARDEN (Length x Width in Feet)__________________________________

NUMBER OF SOIL SAMPLES TO BE TESTED_____________________________________

DISTANCE FROM GARDEN TO ANY NEARBY HOUSE(S)______________________________

____

IS THE NEARBY HOUSE(S) PAINTED ?____

DISTANCE FROM GARDEN TO NEARBY STREET(S)_________________________________

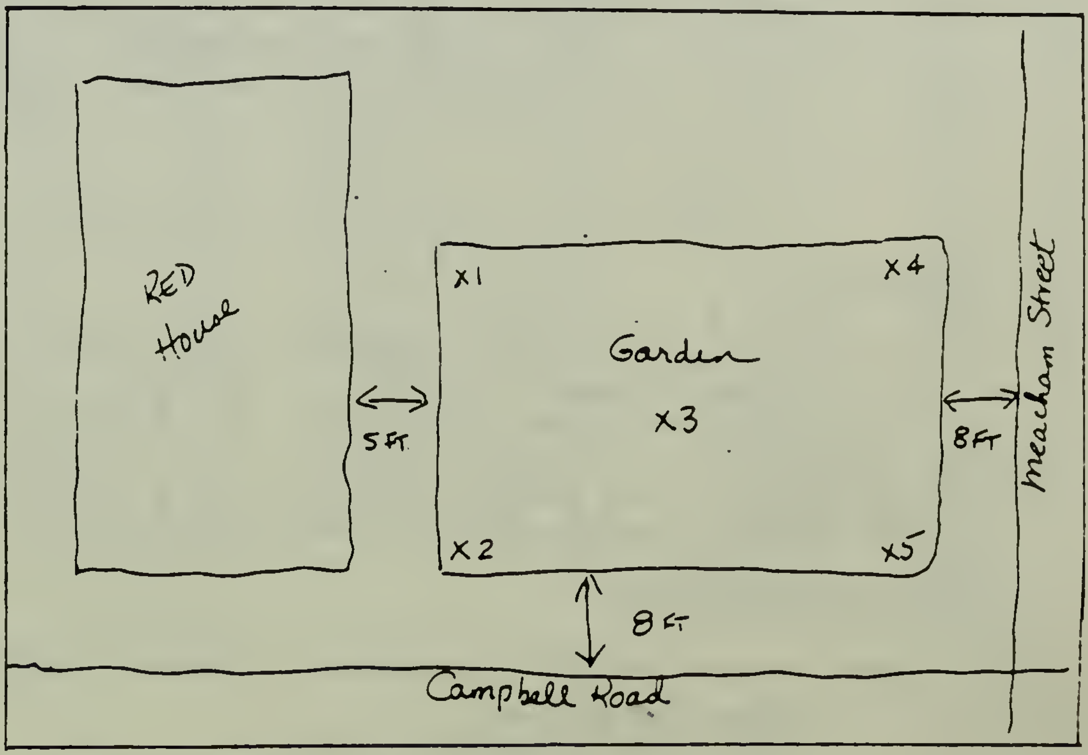
____

IS THE AMOUNT OF TRAFFIC ON THESE STREET(S) LIGHT, MEDIUM, OR HEAVY ? (CIRCLE ONE)

ARE THERE CHILDREN UNDER AGE 6 EATING PRODUCE FROM OR PLAYING IN THE GARDEN ? _____

ON THE BACK OF THIS PAGE DRAW A MAP OR PICTURE OF YOUR GARDEN. PUT AN X AT EACH PLACE YOU TOOK A SOIL SAMPLE. SHOW THE NEARBY HOUSES AND STREETS. HERE IS A SAMPLE MAP:

SAMPLE MAP →
(YOURS CAN BE BIGGER)



ENCLOSE THIS INFORMATION SHEET WITH MAP ON BACK WITH THE SOIL SAMPLES AND RETURN TO SUFFOLK COUNTY EXTENSION SERVICE AT THE ADDRESS LISTED ON THE SOIL SAMPLING INSTRUCTION SHEET.

LISTS OF COMMUNITY GARDEN LOCATIONS
THROUGHOUT THE STATE ARE AVAILABLE
FROM THE DIVISION OF AGRICULTURAL LAND USE

ALSO AVAILABLE:

"HOW TO ORGANIZE A COMMUNITY GARDEN
IN MASSACHUSETTS"

Division of Agricultural Land Use
Mass. Dept. of Food and Agriculture
100 Cambridge St., Boston, Ma. 02202

Massachusetts
grown...and fresher!

E150.2: D75